Indian Artisans

SOCIAL INSTITUTIONS AND CULTURAL VALUES

Editors
R. K. Bhattacharya
S. B. Chakrabarti

About the Book

This special volume on ***Indian Artisans*** *is a collection of contributions made by very eminent scholars in their respective fields of excellence. This has been brought out on the occasion of the Golden Jubilee of India's Independence. The rich tradition of Indian crafts and artisans has been well reflected through the individual papers. These have not only covered a broad socio-cultural spectrum of the various crafts but have also touched upon the implicit aesthetic overtones. The volume also contains useful illustrations to highlight the geographical and social distributions of the crafts and craftsmen in this country.*

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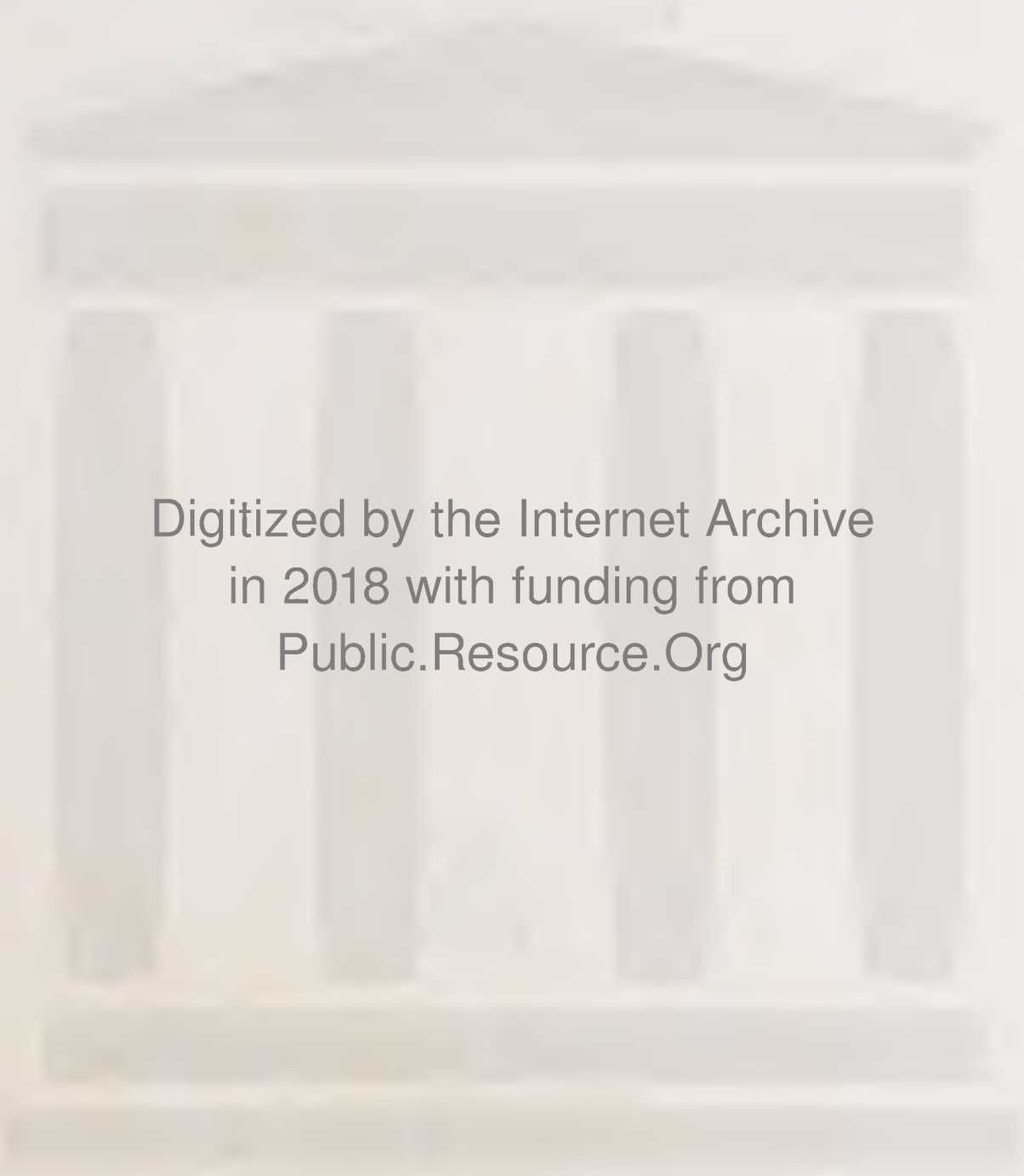

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Social Institutions and Cultural Values

Edited by

R. K. BHATTACHARYA

S. B. CHAKRABARTI

GOLDEN JUBILEE (1945-1995)

Anthropological Survey of India

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In Memory
of
Late Meera Mukherjee

FOREWORD

The Anthropological Survey of India (An.SI) deserves to be complimented for bringing out this volume on Indian Artisans, as its tribute to the Nation, on the occasion of the Golden Jubilee of Independence. Anthropology is the holistic study of Man-in-Nature; a materialistic and institutional complement to the philosophical study of Being-in-the-World. No other living being surpasses *Homo sapiens* in the range and variety of creative expression; it is because of this distinctiveness that Man leaves an impress on Nature - for good as well as bad. It is this impress that cultural anthropology seeks to explore in a holistic sense.

Crafts are an important element of the variegated panorama of cultural expression. Craft is technology - one can trace the genesis of technology to Man creating tools, the wherewithal for survival. Craft is also a creative urge and aesthetic sensibility. Craft is also the product of belief systems and of living traditions; it encapsulates the life of the artisan and the society - the Time and Space - in which he lives. The Anthropological approach, being holistic, views Man-in-Nature as a whole, unlike the six blind men who took that part of the elephant they touched to be the essence of the elephant.

This volume brings together a collection of celebrated scholars of different disciplines; they reflect and together they present a holistic kaleidoscopic picture of Indian artisans. I am sure that the variety of the fare the volume offers would attract a range of readers - erudite scholars as well as laymen. I hope that all readers will come to appreciate the spirit of Anthropology.

(Dr. R. V. Vaidyanatha Ayyar)
Secretary to the Government of India
Ministry of Culture, Youth Affairs and Sports
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PREFACE TO THE SECOND EDITION

This special volume of the Anthropological Survey of India, *Indian Artisans : Social Institutions and Cultural Values* is a part of the commemoration of the Golden Jubilee of India's Independence. A select group of scholars were involved to contribute to the wide spectrum of the theme. Nine of these scholars responded to our invitation and we take this opportunity to thank each of them for their valuable contribution. It is indeed unfortunate that our contributor, Smt. Meera Mukherjee, passed away before this volume could be published and Shri Pravas Sen passed away after the publication of the first edition.

The editors remain beholden to Dr. R. V. Vaidyanatha Ayyar, Secretary to the Government of India, Ministry of Culture, Youth Affairs and Sports, Department of Culture, for very kindly writing the FOREWORD of this volume in spite of having an unimaginable busy schedule. They are also grateful to Prof. Kumkum Bhattacharya of Visva-Bharati, Santiniketan for kindly sparing her valuable time by going through the entire manuscript very quickly and doing necessary improvements. The editors thankfully put on record sincere gratitude to their colleagues, Dr. B. N. Sarkar, Dr. S. Chanda, Smt. Gopa Chakraborty, Dr. P. K. Guha, Sri Anup Giri, Shri Pijush Mukherjee and Sri B. M. Goswami for rendering valuable and ungrudging academic and technical assistance at various stages of the present publication. In the second edition the maps representing various crafts have been put in diffrent shades.

Introduction

It hardly requires an emphasis that India with her enormous variety of crafts and craftsmen withstood all kinds of social pressures, economic hardship as well as political vicissitude since very early days. The innate skill and wholesome dedication of the practitioners, that have gone into the making of this glorious occupational tradition over time, only sharpened the process of perfection and extraordinary excellence in an otherwise ancient social matrix. "Since crafts include all activities that produce or modify objects by manual means, with or without the use of mechanical aids, the range of study is very broad. There is an equally wide range of social forms within which the craftsmen operate" (*International Encyclopedia of the Social Sciences* Vol.III New York, The Free Press 1968, Macmillan Co. p.430). Traditional craftsmanship in our country according to Kamala Devi Chattopadhyay, "has meant far more than skill with materials, more than manual dexterity in manipulating tools. It has meant a total operation involving emotions, mind, body and the vibrant rythm that such a coordination generates" (*India's Craft Tradition*, Publication Division, Government of India, 1980 p.1). These communities, spread all over the country from north to south and east to west, who have associated themselves either individually or collectively in these creative pursuits, have proliferated their activities in a number of specialized areas. One cannot think of the structure of the Indian civilization without ascribing a very special position to this traditionally skilled groups of people, who have, through their indigenous means, articulated an exquisite meaning and inspiring insight into the domain of human cognition. This aspect of the Indian society needs to be highlighted, especially during the momentous year when the nation is going to celebrate the golden jubilee of its independence.

In India the artisan communities primarily form a significantly noticeable section of rural population. Arts and crafts together make an inseparable cultural heritage which remains largely the central focus of the traditional village communities, including a few urban communities. The arts and crafts have remained hereditary and monopolistic occupations for specific communities and have been inextricably linked with the productive system. It presents a wide variety, comprising indigenous

products with their own cultural linkages. The examples are : metal crafting including bronze, brass, bell-metal and gold being fashioned into statues, utensils, cutlery, articles for use in temples, arms, armours and jewellery; wood and stone crafts including wood/stone carvings; decorative and inlaid wood/stone crafts and utility items; products made of bone, horn, ivory, tortoise shell, sea-shell, lac, terracotta, ceramic and glass; basketry and mats and products using cotton, wool and jute. In each of these there is evidence of creativity and traditional links with culture. Arts and crafts of our tribes too enjoy a unique position in this panorama.

In a note on Indian Census and Anthropological Investigations, P. Padmanava, the former Registrar General of India made an over-view of the handicrafts surveys undertaken by the Indian Census Organization during 1961 and 1971 (1978). They conducted these surveys with two main objectives. One, these were included to provide data for planning and development of traditional crafts and household industries and two, for studying the craftsmen in relation to the social setting and their inter-relationship with the immediate larger communities of agriculturists. They brought out a number of volumes at the state level on the basis of 1961 Census concentrating study on 150 traditional crafts intensively. The Indian Census very rightly identified the relevance and importance of the artisan communities and their traditional arts and crafts as a necessary linkage to the predominant mode of agricultural production. This was historically ordained in the case of India which received attention of various acclaimed social thinkers of both this country and abroad. The Indian Census has also brought out a very exhaustive bibliography on various items on arts and crafts spread throughout the length and breadth of this country.

The studies on Indian arts and crafts were conducted by scholars belonging to a number of disciplines along with various development agencies of the Government. One group of scholars was primarily interested in the technological aspects of the crafts whereas the other group was interested in interpreting the social and economic aspects both against the backdrop of descriptive and analytical framework. Apart from the scriptural reference of the Vastu Sastra and Silpa Sastra, the major reference of arts and crafts appeared during the Company's Rule in this country. It was precisely due to commercial interest of the Company that they started collecting basic information on arts and crafts. Subsequently many European scholars also participated in the same ven-

ture. At a later date, apart from the Indian Census publications, other specialized agencies like the Khadi and Gramodyoga Board, the All India Handicrafts Board and various other organisations collected a huge body of information and published materials on traditional handicrafts and arts. In India more than 110 scheduled caste communities distributed in 18 States are still found pursuing some kind of craft, e.g. weaving, basketry, pottery, blacksmithy, woodwork, engraving, dress making, making coir product, modelling, metal work, leather work, constructing musical instrument, stone work, rope making, gold and silver work, vessel making, saddle making and various others. Similarly, there are about 60 tribal communities who still practise some kind of craft using their own forms. They are distributed in 17 states of India. They are engaged in weaving, basket making, pottery making, blacksmithy and iron smelting, woodwork and engraving, rope making, construction of musical instruments and various other items. This apart, about 83 general communities other than S.C./S.T. are engaged in specific art and craft activities (See Appendix and Map).

The Anthropological Survey of India, has thought it appropriate to bring out a volume on this specialized area through intellectual enquiry by collecting together the contributions of a group of distinguished scholars from across various academic disciplines. Initially about 15 scholars were approached for this purpose. A few of them ultimately could not make it because of their pressing pre-occupations.

In her paper on the Vaskara Artisan, (Late) Smt. Meera Mukherjee refers to the inner cultural core of the Vaskara signifying the strength of both the sun as well as the sculptor. She further elaborates on various meanings of Vaskara. In the Study and Support of Rural and Tribal Arts and Crafts, K. G. Subramanyan has brought out the sharp conflicting trend in the context of preserving and encouraging rural arts and culture as well as those of tribes. He has shown equal concern for the consequential changes that might come as a natural process. But he is apparently disturbed by the incidental effects of the market forces on the continuation of the excellence of traditional arts and crafts. Jan Brouwer in his paper on Artisan's Indigenous Knowledge, harps on the traditional ideology of the artisan castes in south India which operates as a driving force in their occupation. He also looks into the amazing correlation of the indigenous ideas of the artisan groups with the concept of making money and profit. Baidyanath Saraswati in his article on the Potter Community, mentions

that the potters consider, contrary to the modern system of knowledge, their creativity and cognition as God's gift. He brings an analogy to establish that the rythm of life of people rotates like the potter's wheel and creates an aesthetically beautiful product with the blessings of God. Stephen Inglis introduces his studied people who carry forward an unbroken tradition of inner wisdom. Pravas Sen in his article on Folk Musical Instruments of Bengal (more particularly of West Bengal), lists out folk musical instruments of mainstream culture as well as musical instruments of a distinctive group of adivasi folk. He concludes that like material culture musical instruments of our country present a case of unity in diversity of the Indian society. In the same vein Onkar Prasad presents the case study of the Santal Musical Instruments and tries to communicate that such instruments symbolize the cultural expressions of life of the people. Atul Chandra Bhowmick in his presentation of the Traditional Textiles of Bengal, deals with their historical background and various remnants of styles and techniques which came in course of development of this great tradition. Lotika Varadarajan in a slightly different context brings in the Calenderical Systems of the Nicobarese. What is noticeable in this paper is the perception of this indigenous oceanic people about the technology and management of their immediate environment for useful exploitation of the resource base for their living.

It was contemplated that each paper would delineate the socio-cultural and historico-economic context of perpetuation of a craft as pursued by a particular group of people in a particular area. The present volume aims at bringing in the implicit aesthetic meaning in the technical production of a craft including its social function. By and large the objective aimed has been reasonably achieved in these collective contributions. These studies have touched upon some issues on the transmission of traditional knowledge and wisdom in the perspective of the present state of dependence on an aggressive modern technology.

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Contents

"Bhaskara" Artisans

Meera Mukherjee

This work on the Bhaskaras, has been done under conditions of great difficulty. In some parts the work may seem to be scattered and without a central thought binding the whole together; but I have written it, with the single idea of the "Bhaskara Artisan" in my mind. The central point is the name of the artisans - "Bhaskara" - which brings the senses of 'The Sun' and 'Sculpture' together. This is why I have referred to the Konarak, and other Orissan temples, their decoration, and the sun which in its movement casts the shadow of the temple decoration on the walls of the temple. I have also sought the meaning of the word Bhaskara in the dictionaries and have shown the variety in the meanings.

For a very long time, I have been intrigued by the name of the group of artisans 'Bhaskara'. Bhaskara is the sun. When I went to Tamil Nadu, I found a name of an artisan "Bhaskaran". Bhaskaran told me that his forefathers were famous for stone carving and even today he was following the tradition. But I could not find out why they have this name.

I have heard that there was once in the sun temple a place for the bright sun ray which fell just at the middle of the altar and originally the presence of the sun was worshipped. This affinity between art and the sun urged me to find the cause of this connection, as also of the shadows it casts on the parts of the sculpture and around it.

In Bhubaneshwar, Puri, and at other places Orissa temples have fine carving and workmanship. Those are not only decorations but with the movement of the sun and the changing shadows they appear as a script and continuous writing. I have heard once there were people who could read this script and that they knew the language.

The Bhaskaras of West Bengal can be found in Dainhat in Burdwan district and in Murshidabad. In Murshidabad district the Bhaskaras are found in a number of villages, such as Kalabag, Jodh-Kamal, Chot Kulia, Rampuria, Mirzapur, Sekendara Nurpur, Lal Kundia, Aurangabad and Dakshin Gram.

In "Tribes and Castes of Bengal", Risley (1891) has written of "Bhaskara", a small group of artisan, who are known as Bhaskara. They work with wood, stone and metal. Their social position is like the Dhobis. I personally though did not find any affinity between the Dhobis and the Bhaskara group.

Long ago I met a teacher of the Bhaskara group. He was working in a college or in a university. He informed me casually that he had heard from his forefather that they had migrated from Rajasthan and used to work on red stone.

I have met many artisans from the Bhaskara group but never again heard that they had come from Rajasthan. However, in Dainhat in Burdwan district of West Bengal there is a big temple made all in red stone. Enquiries revealed that according to local tradition red stone blocks were all brought by the artisans from Rajasthan.

Bhaskara villages in Murshidabad are scattered over a vast area, under an open sky. Near their villages are found boats in various stages of construction. Bhaskara artisans work in the open outside their villages, making items of furniture such as tables, chairs, racks, doors and windows, which can be seen outside their home scattered in the open in unfinished stages. The large wooden cart wheels are also seen. The wheels display the workmanship of the Bhaskaras.

I searched the dictionaries to find the meaning of the word "Bhaskara". I found that the word has a very wide variety of meanings.

List of the meanings of Bhaskara :

[1] *Bhaskara* - means surya, the sun, the giver of light and warmth.

[2] *Bhaskara* - means light; another meaning is related to the science of light. In the Konarak sun temple there is a place for astronomy. This is so because of the sun. We have heard that every sixth year there is a solar eclipse and during that time the shadow of the sun falls on tip of the sun temple that is fashioned with angles and corners.

These corners reflect different times connected with the sun. And these corners are important in finding the exact time of the year, the month, etc.

[3] *Bhaskara* - Another meaning of Bhaskara is *Kushtausadhi*, medicine for leprosy. Apparently connected with sun light, some properties of sun ray may cure leprosy. I am quoting an ancient story of the sun temple, leprosy and medicine. Krishnna cursed his son Shambo that he would have leprosy. From ancient time people knew that there was healing property in the Chandrabhaga river. When Shambo got leprosy he bathed in the Chandrabhaga river by the side of the sea and this cured him of leprosy. Near Konarak sun temple there is a Leper Ashram, where the lepers live and run the ashram on their own. This ashram was established in a very ancient time. Still it is there. So here we find the sun, medicine for leprosy and astronomy connected with each other.

[4] *Bhaskara* - From another dictionary the meaning is connected with light, lamps, and science of light, also the lens of binocular, telescope, field - glass, etc.

[5] *Bhaskara* - According to Rajnirghata is *Subarnam* - gold, *Suryagni* - sunfire.

[6] *Bhaskara* - *Mugdhobodh* grammar *Dipti Yukta* which probably means three glowing worlds, *Bhu, Bhuva, Sva*, the earth, the sky and beyond it.

[7] *Bhaskara* - Surya Kanta, some legend can be found in Sanskrit and in the Tibetan translation of *Lalita Vistara* : *Agni mani*, fire jewel, sun jewel, *Dipta pala* (refulgent stone), *Agnigarbha* - essence of fire.

[8] *Bhaskara* - Demon or *Rakshasa*, it reminded me of the *Asura*, they did wonderful work but suffered from burning glass. H. Layard (1849), among the ruins of Nineveh and Babylon discovered in the palace of the Assyrian King Asur Nasir Pal (855-860) at Nineveh rock-crystal lens of plane convexically $1\frac{1}{2}$ inches in diameter with a focus of $4\frac{1}{2}$ inches cut such like our own burning glasses, though somewhat crude in its workmanship. About the lens, crystal lenses - Berthold Laufer (1987) mentions in his "Sino Tibetan Studies" as also the burning lenses in China and India. Crystal lenses wherever employed in ancient time served for one man's purpose exclusively, the optical method of fire making. Streptiades' description fits crys-

> tal lens very well indeed. "There are other historical reasons which warrant the belief that the first burning lenses were cut from crystal and not from glass. Pliny, in his Natural History, makes two references to burning lenses both of crystal and glass. In his chapter on crystal he says, "I find it stated in medical authors that crystal balls placed opposite to solar rays is the most useful contrivance for cauterizing the human body .... When crystal is placed on drywood shavings, the sun rays strike it and as the smoke rises, a fire is lit and this bright flame is regarded as sacred fire. There is no sacrifice more pleasing to the gods when offered with this fire. There are historical reasons which warrant the belief that the first burning lens were cut from crystal. It will be noticed that Chinese physicians made use of crystal for cauterizing the human body".

It is remarked that if glass balls filled with water are exposed to the sun light, they produce such vigorus heat that ignite clothes. Is it possible that the ancient craftsmen who could cut such crystals for fire making were called Bhaskara - fire makers ?

Nimai Chandra Bhaskar

My assistant Nimai Chandra Bhaskar has been working with me for thirty years. He says that his people have been working in wood, stone and metal, as their hereditary profession. But when they could not work in their ancestral profession, they drifted to other work to maintain their families. But whenever they found opportunity to work in their ancestral line and whatever work they did for economic reasons, other people did not regard them as belonging to their contemporaries in other groups.

Along with art form changes in the market, there was another cause for their drifting away from their own age-old profession. This was change in the course of the river Ganga, which had led to disappearance of temples by the side of the river. The remains of earlier craftsmanship have thus been washed away. The river which sustained them has also changed their folk. So working on stone and metal have generally vanished leaving working, on wood as their medium, making boats, for instance, as a regular occupation of today's "Bhaskara".

Nimai Chandra Bhaskara in his early youth earned his bread by making wooden doors and windows. In wood they make pedestals on which images are installed. With me Nimai Bhaskar is making bronze figures and artefacts. Bhaskara artisans are distinguished from other artisans by some of their ritual observances.

Star connection

From childhood we have heard devotional songs about stars. *Tara* is the word which is used in devotional songs. *Tara* is the name of the goddess who frees us from human ties. *Tara* is a goddess who is meditated upon. In the British Museum I have seen a superb image of *Tara*. *Tara* is also used by the Buddhist lamas. This image is used for meditation. One sadhu told me that this *Tara* was supposed to be, "Suktara" Venus star, which is seen in early evening sky and also at dawn.

When I was working on "In Search of Viswakarma" I noticed star being used very closely in our games and life. Wooden or bamboo kite reels have, sometimes 13 spikes or 7 spikes. These numbers of the spikes are supposed to be 13 or 7 in a stellar constellation. This was the time when I became aware of stars being tied to our life intimately.

Anne Millard's book for young students, "Pyramid" also has given us the star connection. She writes, "scientific research has shown that of the narrow shafts in the great pyramid, two point to the Polar star. A third points to Orion, and the fourth to Sirius". So when we see that the Bhaskara rituals have connection with stars such as the Orion, "Saptarshi Mandal", we realize that our lives are bound with stars.

Bhaskara rituals

After marriage, the father of the girl, sits facing east, though the sun is not there. The priest, the bride and near relatives sit by the father, who address the moon, the planets and the stars, saying "In front of you, the moon, the planets and the stars I give the daughter in marriage to the bridegroom". As the night ends, the newly wedded couple, starts for their home, as the sun rises.

The Bhaskaras do not observe the wearing of the sacred thread (*upvit*). Instead, at the ceremony of turmeric (rubbing the body with turmeric) the ears of the bride are touched with the point of a needle. A daily practice among the Bhaskaras for the youngmen of the family is to pour water on the *tulsi* plant, at the rise of the sun, and make wishes for their future. The Bhaskaras have a special tie with the heavens, the sun, the moon, the planets and the stars.

There is a special custom among the Bhaskaras concerning a newborn child. When the child is seven days old, it is wrapped in a new red

silk cloth and placed on a square piece of wood, generally used as a seat on the floor. On that piece of wood, on the left side of the head of the child are placed a reed pen and *alta*, (a red liquid used in lining the feet). At midnight, when everyone else is asleep the new-born child is placed quitely in a lonely place at that time. The *Kalpurusha* (Orion) is believed to write down the course of destiny of the child.

On the night of Kali puja when the fire display is finished, the courtyard of a Bhaskara home will be washed and cleaned, a square *alpana* (a decorative drawing) is drawn in the courtyard. The Bengalee in general make the design the *alpana* with floral design, but the Bhaskara *alpana* is filled with the sun, the moon and with the stars such as Orion, and other constellations. Beside these drawings, seven lamps are lit, and placed in a square courtyard, dry fruit and home made sweets are placed there with a tumbler of water. The eldest woman member of the family guards this alone. The *alpana* is made by the lady. Before the sun rises, the lady removes all traces of the *alpana* and cleans the yard. The seven lamps are floated either in a pond or the river Ganges.

This ritual is a closely kept secret, so that even most members of the Bhaskara family are unaware of it as a family ritual. This observance is unknown to the Bhaskaras in general.

The Bhaskaras perform *yajna*, a vedic ritual in almost all their festivals - such as *Satya Narayan Puja*, child birth, *Shasti Puja*, etc.

The place of *yajna* in a square open field, is lined with rice or chalk powder, and another with vermilion and a third with turmeric powder. Sand is spread in the field and *Belkath* (small pieces of wood cut from branches of a *Bel* tree) are arranged. First fire is lit with *ulukhar* (a plant with branches which are like wood at the bottom and straw on top) : this is dipped in *ghee* or in clarified butter. The fire is kept going with *belkath* pieces - as the fire rises straight its rising flames signify the rites to be successful.

Evening of Bhaskaras

The Bhaskaras, who go out to work in the cities, come back in the *dingee* (boat) across the Ganga. Those who work at distant places come back only three or four times in a year. After returning the Bhaskaras wait for the ladies of the house to light the evening lamp, before they enter their homes. They give great importance to this practice. Another

striking thing is that the men of the house, young and old gather together without disturbing the house. They carry their *khole* (drum) and *kartal* (castanets) and assemble either under a tree or in the yard of a temple and sing *kirtan* (devotional songs). These *kirtan* are not sung inside their homes. They sing *kirtan* every evening. They place great importance to *kirtan* being sung in the month of Baisakh. In Mirjapur, people from far away come to hear and join the *kirtan*. At the end of the month of Baishakh *kirtan* are sung continuously covering a day and night, one group of singers following the previous group without a break. They call this *astaprahar kirtan*. Sometimes they move in a group through places in the dark of the night. The stars in the sky seem to come down to hear these *kirtan*. The songs cease with the glow of the rising sun in the east.

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The study and support of rural and tribal arts and crafts

K. G. Subramanyan

Many years ago an artist friend of mine wrote an article in the Economic Weekly (Bombay) advocating the necessity of preserving and encouraging rural and tribal arts and culture. A subsequent number of the same weekly carried a sharp rejoinder to this by another friend of mine, a sociologist, who saw in such advocacies a covered attempt by the advantaged to keep the disadvantaged where they were and deny them access to the normal avenues of progress - modern education, modern technology, modern occupations and through these, economic improvement and, finally, political power. My artist friend's advocacy was doubtless well-meaning and not part of any premeditated conspiracy. As a member of a society that was fast losing its moorings and cohesiveness, its old traditions and refinements and becoming progressively self-centred and pedestrian, he came to view rural and tribal life, art and institutions within a romantic aura. And probably saw in them the relics of a lost paradise. Certainly his familiarity with rural and tribal folk was only cursory and confined to a few visits to their celebrations and *melas*, where some of their characteristics came into public view — their natural zest for life, their openness and simplicity, their refinements in speech and behaviour, inborn aesthetic sense and respect for nature. Conversely my sociologist friend should have had occasion to see another side of their lives during his field visits - the challenges they lived amidst, their poverty and hardships, their lack of formal education, their irrational beliefs and periodic attempts to offset the barrenness of their lives with bouts of inebriation or orgiastic outbursts of song, dance and ritual. He should have honestly felt that however sincere his artist friend may have been he was looking at rural and tribal folk from an unfeeling distance, even a position of condescension and advocated the continuance of their art and culture in the same spirit as a foreign tourist

advocated the preservation of certain kinds of natural environment and wild life, for his own amusement or edification.

Our discussions on rural and tribal art and culture are bound to be beset by this conflict. For all our claims to open-mindedness and impartiality each of us is bound to view these from a slightly different point of view. And the points of view of the advantaged and the disadvantaged are bound to differ on various matters. Besides, in a progressively egalitarian society where everyone has equal rights to go up in life but not equal facility there will also be certain conflicts of interest, even contradictions. So while, on one side, we see many genuine efforts at the integration of the various groups, we also see, on another, how these conflicts of interest go to harden the distinct identities of the groups, even perpetuate them. Even the high-minded partisans of the underprivileged whose main intention is to get them accepted as equal and undifferentiated parts of the larger society tend to lay, be it for strategic reasons, undue stress on their right to traditional locations, occupations, mores and beliefs. So there is a divided agenda on both sides one pulling towards change, one leaning towards conservation and these vary in nature and substance from individual to individual, certainly from group to group.

This problem is compounded by the fact that there is a sense of alienation ingrained in the attitudes of the educated urbanite, whether high-brow or low-brow; he considers his world as separate from the world around. This world around is to him no more than a feeder environment, or hinterland, with its geo-physical facts, *flora and fauna* and a host of naive, even nameless, earthlings whose bounty or labour he depends on. These earthlings may not be so naive any more but the strategies that the urbanites use to gain their attention or support makes one think that they still hold on to the notion. Out of generosity, or for reasons of self-interest, they occasionally seek to improve or urbanise them, or, in their words, *uplift* them; and bring them closer to themselves. But the models, strategies and tools for these are drawn from those of other urban centres, often of other lands, without any reference to, or understanding of, the environment or the people in question. Naturally these efforts create as many problems as they solve and leave a long trail of discontent. This can be seen wherever this process is on; specially in our country where people are obliged to clamour for their rights and privileges on the strength of some group or cultural alignment.

Where does this leave one in the end? The urbanites pursue a pattern of life that is different from that of the rural and tribal folk; they are

part of a growing industrial society and enjoy the various benefits that come with it. The rural and tribal folk also long for these benefits and will willingly conform to the pattern if they get a chance, disregarding if necessary old conventions and social strictures. And in a progressively globalising economic system they will also be under pressure to do so in various ways and become part of the far-flung consumer society it drives towards. Already there is an effort in our country to declare agriculture as an industry and making it capital intensive; and through this advance towards creating a rural proletariat subject to the same pressures as the urban one. What is withholding the rural folk from acceding to this readily is the unattractiveness of the terms offered so far and the uncertainties they apprehend. But the inflow of multinational capital and the various blandishments it comes with may change this scene radically as it has in many other countries.

At the same time a section of the urbanites (be that a small section) is coming to realise that the benefits that accrue from the industrial system are often outweighed by the tensions and instabilities that accompany them; and that the whole process leads, inevitably, to the dehumanisation and cultural impoverishment of the individual. This motivates them to refocus their attention on certain features of rural and tribal life, as it is or was, - its human pace, closeness to nature, greater fellow feeling and a lively communicational circuit that encouraged personal creativity and concern for the environment. But they are also aware of the difficulties of ensuring these in a burgeoning industrial society; as these arose from a pre-industrial production system and the various concepts, skills and social interlinks that grew with it. At one time some made bold to think that this trend towards industrialisation could be reversed, or at least tempered, by taking recourse to protectionist strategies. But this seems unlikely in today's circumstances, when no part of the world's economy can stand by itself or sail against the stream. Besides, the economic circumstances of the rural and tribal folk are such that they will plump for any change. So the only sensible option left to us is to think in terms of a post-industrial society where, after attaining a minimum standard of life, the generality of people will have, or can be educated to have, a more considered vision of their *real* needs and the necessity to alter or civilize their growth targets in their light and create similar, if not identical, circumstances and decide a pattern of life that will give a big place for human creativity or psychic fulfilment bypassing the enticements and pressures of the market system.

This is yet to be. But before we come to this we might as well try to

see why rural and tribal arts and culture exercise our attention today, even more than they did at one time. This is largely due to a radical change in our general perspectives or what may be referred to as the growth of a postmodern attitude. We do not any more find some notions and postulates of the early modernist world as tenable or sacrosanct; particularly those related to human history and progress and its future directions. It is now largely understood that *the modern world* (or whatever it signifies) is the outcome of the civilized man's effort to go beyond his conventional moorings and explore the larger world; where he came face to face with new geo-physical facts and encountered diverse human groups whose ways of living, thoughts and beliefs were in many respects different from those of his own. This aroused his curiosity to know more; and to follow, look for a kind of order and sequence within their diversity. The discovery of a kind of seriality in certain facts of nature, followed by speculation and experiment around their possible linkages led to the notion of evolution. To the natural scientist it appeared that there was a ladder of ascent from amoeba to man; and life became more complicated and self-dependant at each succeeding stage. It seemed to him that in so far as the human being was able to, through the exercise of his mental powers, release himself from absolute subservience to nature and had found ways of controlling it, and using its powers for his own purposes, he was assuredly at the top-end of this ladder. This gave rise to the notion that man was not just a child of nature but its lord as well; nature was his fiefdom. His efforts to study and marshal the forces of nature led to huge strides in science and technology and these to drastic changes in the economic and political systems. The discovery at the same time of diverse human groups and their dissimilar ways of living and thinking led to a critical review of the information gathered and their rationalisation. In the process they imposed the image of evolution on human history and divided human growth from the prehistoric times to the present day into successive stages, with the implication that each succeeding stage was an improvement on the previous one and brought man nearer to his true destiny. Some even ventured to think that continued human effort, or force of circumstances, can take him beyond himself, or make him superhuman.

Although some of these readings, especially those related to the growth of technology, social, economic and political institutions seem reasonable enough there are certain areas where they go astray. When I was small I remember coming upon a book on the arts of the prehistoric and early historic times which was titled *The Childhood of Art*. As the title

suggests it assumed that adulthood could be assigned only to postrenaissance European art and so consigned all art that went before it to childhood or adolescence. Only a few years later people started to realise that this was a misreading. Prehistoric men may have been backward in many respects but in art, as the few surviving relics prove, they were as good, or even better, than today's artists. And many artists of Europe came to think that familiarity with the arts of the *primitive world* could unfold to them new vistas of creativity. Side by side, various anthropological studies revealed that many features of the so-called primitive cultures were not so primitive; and that some of them were astoundingly subtle and percipient. And these covered their understanding of natural facts, their language systems, arts and crafts, their relations to each other and the environment, even their images of themselves and moral ideas. There was much in them that could refurbish our perceptions. Not only were some of their solutions and thought packets highly appropriate to their times and locations, they were often more circumspect and qualitatively superior to ours in many respects.

The way a New Irelander made his ritual *malaggans* or the bronze workers of Benin or Bastar cast their metal objects are far superior and more economical and environmentally appropriate than our art school methods. Ambitious attempts by some of our technical experts to improve the age-old techniques of our traditional potters brought home to them that, considering their purposes, intentions and the surrounding circumstances, they were the best conceivable and brooked no improvement. Australian potters who studied the work methods of certain Melanesian artisans also came to the same conclusion. The efforts of some of our engineering schools to improve the traditional bullock cart's wheels brought home the same truth; while the new wheels lasted longer, they strained the bullocks, damaged the roads, were unsuitable for the open country and put up the price of the cart; the redesigners had not gone deep enough into the various interlinks.

This is not to say that things will remain as they are and there will be no need for improving current methods, or that they are always the best. But only to emphasise that before any such effort, a full survey of what was prevalent through the ages, in its functional complexity, is an essential and often rewarding prerequisite. The disdain with which the past was passed over in the early days of modernism does not any more seem apposite. People have come to realise that certain traditional methods are eminently functional and useful, whether it be in the field

of medicine, architecture, conservation of nature, utilisation of water resources, even social management. In fact some experts have even come to marvel at their rationality and circumspection. And in a postindustrial world, where the main imperatives will not be the conquest of nature, management of manpower and limitless production and consumption but a way of living that will ensure better rapport between man and man, and man and nature, and will divert human energy from the crazy whirligig of production and consumption to more creative pursuits, these previous models can be particularly instructive, especially those in the field of arts and crafts. For one can notice in them an inbuilt infrastructure that responds to the different (and often opposing) urges and needs of the human being, balancing the focus between service and self-expression, utility and aesthetics, discipline and innovation, work and relaxation; and through this, contributing more roundly to physical and psychic fulfilment.

Keeping this in view we would need to undertake detailed and comprehensive surveys of every kind of art and craft practice, documenting their forms and functions, materials and techniques, variations in practice and the specialities of each. The main intention of these surveys will be to build a *resource bank* of information in their regard, supplemented by museum collections of exemplary specimens and the materials and tools that went into use, adequate enough to give a full picture of these to future generations even if their practice died out, or was abandoned, or changed out of shape. This could work as a *seed bank* that holds out the promise of their revival or refurbishment in the time to come if such a need arose. The picture they present may also re-educate both the (listless) practitioner and the (apathetic) public of our time into realising their true value and responding to their niceties. And on the top of this attract the attention of a new tribe of non-traditional aspirants, or artist-craftsmen, in urban society.

Under the able direction of Sri Ashok Mitra, the Census of India did make a laudable effort to give this a start and present the information gathered in low-priced bulletins. They are very valuable documents. But the work has not continued and detailed documentation of each art/craft image, process, materials and techniques under the supervision of suitable experts still remains to be done. An effort to compile an encyclopedia of handicraft practice later in the day did not make much headway. And the few random studies as there are of some of these by specialists are so loaded with legend and surmise, history and theory,

and so low on the information required, that they do not serve the purpose envisaged. In a country like the USA, where the presence of traditional crafts is much smaller than in ours, handy booklets that explain the essentials of practice of various old crafts like *Pueblo* pottery, *Navajo* rugweaving or making of *Kachina* dolls are available to each school boy, if he is interested in them. And their museums are full of the finest specimens of the so-called *ethnic* arts from all over the world. But in our country, with such a large panorama of rural and tribal arts, very little has been done in this regard. If anything has been done it has been done at the initiative of various scholars of ethnic arts from outside this country. Besides this, museums of rural and tribal arts are very few in our country and those there are unable to look after their holdings suitably, leave alone document them and publish them, for lack of funds and public support. *But this is a pressing need.* For the scene is changing rapidly and shrinking in size; many portions of it have been lost already without any proper record. And such a record is indispensable if we want to reconstruct the scene at some time in the future, in case the scene disappears. It will also help us to plan the survival of some of it in the changing circumstances, if there is such a possibility.

This last brings us back to the controversy we started with. Will such an attempt interfere with the pace of progress of the rural and tribal folk, as some fear? If we went by the advice of the traditionalists, who wanted to foster them intact with their total cultural base, it will. But this is beyond question; it is both unreasonable and impractical. The rural and tribal folk have every right to change their ways of life and keep up with the rest of society. We all belong to groups that did so at sometime or the other. But with a better understanding of the process of change it should be possible for us to visualise that some of these can find place in the changing life schedules. Many of the arts practised in the rural households can find a place in the new educational programmes and community activities, along with music, dance or drama, outside their old functions. Similarly professional arts and crafts, especially those that have noticeable refinements in image and fabrication, can be given a place in the new consumer market, if they have lost their traditional ones.

To elaborate this a little, all rural and tribal arts are not of the same kind. Some of them are related to certain social observances of the rural and tribal folk and so to a way of life; they form part of the ritual paraphernalia for sanctifying a place, celebrating an occasion, propitiat-

ing spirits, etc. etc. And through these they add colour and joy to the environment and a special meaning to their lives. They are also, in a sense, a subtle vehicle of social education that picturises to their youth a calender of existence against a shared background lore. These arts are practised by individuals or groups who may be called non-professional - in that the range of the skills called for is small and, so, easy for each person to acquire by plain exposure, not methodical training. For the same reason they are highly vulnerable; any change in the way of life or the environment that supports them can threaten their existence. They are also affected by changes in attitudes ushered by modern education and social pressures. The Kanbi women of Saurashtra who used to embroider the spectacular *Ganesh Stapans* (to go over their doorway on special occasions) do not any more do so as their menflok have moved to the towns for employment and their life styles have changed. The Rajasthani women who moved from their mudbuilt homes in the villages to the crowded shanty towns in the cities have no walls where they can paint their fabulous murals. Rural and tribal children who go to school are, in a sense, uprooted from their natural surroundings and lose the propensity to learn the various skills current in their neighbourhoods. Changes in social and economic status and progressive urbanisation also force people to abandon such art practice as something below their (newly-acquired) station. Years ago while walking through a village in Haryana with some friends I came upon a remarkable mudhouse with clay grills and reliefs with mirror inlays that, in the sunlight, scintillated like the interior of a Mughal palace. When I wanted to know who made it I was introduced to a genial and prosperous-looking peasant woman from Punjab who said shyly that she made that when she came here as a bride, when her husband was building the house. She no more did so. Her daughter-in-laws, all city educated, did not want her to soil her hands with clay. Nor would they soil theirs. Then, breaking into a smile that mixed a sense of pride with that of regret, said that her youngest son was trying to take her to British Columbia. (Did the sun shine there as brightly as it does here?). All this is inevitable. Whatever redress there is will depend upon the educational planners (as already mentioned), if they are sensitive enough to provide for certain avenues of cultural exposure and cultivation of traditional skills in their educational programmes; or social activists who will encourage the grown-ups to continue the practice of traditional skills and give it a new reason and meaning.

But not all rural and tribal arts are non-professional. Many of them are practised by trained artist or artisan groups to address the demands

of a certain clientele. They may be simple like the weaving of mats and baskets or making of toys, or more complicated and craft-specific like pottery, woodwork, metal-work, stone carving or wall or scroll painting. Their products can be described as *art commodities* — commodities because they go to answer a demand, art because the makers observe certain levels of excellence in image and fabrication that exceeds this, which their users recognize or respond to. Such users are dwindling; they are outnumbered by those who are happy with tawdry alternatives. So, to survive, the craftsmen have to learn to serve a different clientele, even different demands. This contingency was there even in the traditional scene when there were drastic changes in taste or patronage. Leather workers became mural painters, toymakers became *patuas*, potters and metal-smiths icon-makers or *vice versa*. But today's craftsmen are at an additional disadvantage. In an industrialising society their goods have to compete with mass-produced goods. The market accepts these latter readily as they are cheap and fulfil the changing utility norms. And this market is largely unconcerned with extra-utilitarian considerations.

So those categories of handicrafts that produce mere *utility goods* are likely to be edged out sooner or later. Only those categories that produce what may be called *art goods* will have a better chance to survive, as their individual differences in image and craftsmanship cannot be matched by mechanical reproduction. But these too are likely to lose their traditional markets, as the life styles of their traditional patrons are undergoing distinct change. Those beautifully designed, and often decorated, metal pots and *lotas* and elegant kitchenware that were seen in every middle class household about a hundred years ago cannot be seen there anymore; leave alone the accoutrements of worship, special trays and lamps, censers and icons and portable shrines. They have all either gone to the scrap merchant or to collectors of ethnic artifacts, who enjoy displaying them in their houses; or to museums outside the country. Some of the collectors are people of taste and understanding but the vast majority are low-brow and to them these are no more than exotic curios. They often put them to distressingly inappropriate uses. They use censers as ashtrays, icons as door knobs; make of *deepalakshmi* supports for tables carrying drinks. There may be worse instances, I have had occasion to see an ancestor figure of *Tanga* (Micronesia) redesigned as a sex toy. The low-brow market can also have a negative impact on these arts if its demands vulgarise them in both content and quality. So the change of markets has obvious advantages and disadvantages. It holds out, on one hand, the promise of the survival of these arts in a changing society, but

it also tends to isolate them from their old concepts and norms and sometimes disorient and vulgarise them. The artisans themselves may not have the vision or the wisdom to negotiate these changes, having worked for long years within a preconceived system in a subordinate status. So they would need the advice and support of intermediate agencies, official and non-official, that can give them the needed directions and incentives to redeploy their skills for new purposes without lowering standards. And also educate the new markets about the special virtues of handcrafted goods and the cultural reasons why they deserve to be encouraged.

Some thought was given to this when our country became independent and was making plans for its industrial development. Although most of our planners were influenced in this by the models and strategies of the industrially developed nations they could not go ahead at the pace they wanted. They had to come to terms with the ground realities. Part of this was the presence of a staggering body of craftsmen and artisans in this country (whose numbers, on a modest count, was two times the population of a continent like Australia) and whom they had to keep in employment to avert serious economic crisis. And they were in no position to find the capital needed to divert them into industrial employment if they so desired. Besides, a large number of them were too highly specialized and skilled to be allowed to go to seed or diverted to other channels; their exquisite workmanship and sensitivity was cherished throughout the world. So their neglect or diversion would not only have damaged the country's cultural scene but also aroused worldwide criticism. There was also another important reason; the support and development of village industries was one of the proclaimed objectives of the national liberation movement which they could not neglect or overlook.

So the new government set up organisations like the Khadi and Village Industries Board, the All India Handloom Board and the All India Handicrafts Board to give them special attention, - i.e., to protect them suitably and help their development, find the right markets for their products, improve their living and working conditions and provide workshop facilities, and ensure them better returns.

At about the same time several world organisations, too, had started voicing their concern about the progressive disappearance of the craftsman and artisan traditions all over the world and looking for ways

to refocus public attention on them and sustain and revitalize them. They also sought to encourage the growth of an artist-craftsman's movement in the industrial countries, where the presence of traditional craft was negligible or non-existent. Certain groups of people, who were trying to activate a *counter-culture* in the face of a pressure-ridden industrial society that marginalised the individual, even went forward to talk of craft as a way of life. Craft councils were formed in different countries and they were affiliated to a world body. They tried to familiarise a section of the urban public with the virtues of traditional arts and crafts through exhibitions, workshops and seminars. They also assisted the artist-craftsman's movement by setting up or supporting the essential infrastructure-exhibition galleries, sale shops, stores for materials and tools and technical and promotional publications. This looked promising in the sixties and the seventies when a section of artists, outraged by the increasing trivialisation of art and neglect of hand-skills, came to approach, and draw resource from, pre-industrial cultures and their artefacts and skills. Its influence even seeped into the school programmes of some countries where special efforts were made to introduce young people to the so-called *ethnic* arts and their techniques.

But this impact was shortlived. The new capitalist society which had managed to subdue all ideological opposition, even obliged its erstwhile opponents to accept its objectives and strategies, killed all such efforts by a kind of perverse munificence. Its patronage reduced art-craft to *funk art* and bestowed on the efforts to build a counter-culture the status of a *cult*, that did not relate to or defy the ground realities only added to it a dash of colour or off-beat liveliness.

This should inform us of the difficulties ahead, when the new consumer culture would have fully taken us over. This was why we started by saying that if we do not have the power, or the means, or the wisdom to withstand the pressures now, we shall have to wait for a future date when our perspectives will be clearer. And preserve for that date all the information we need of these arts and crafts in extensive heritage archives. At a time when people discuss the necessity of gene banks and seed banks, the usefulness of such *cultural* archives or *resource banks* should not be difficult to recognize.

As it is we still have a sizable presence of these arts in the country. The support organisations mentioned are there too, even if some may have undergone change of name or orientation. New organisations have

come up, like the Zonal Culture Centres whose objectives are (presumably) to help each cultural form to know itself and others and encourage informed growth; or like the INTACH whose main concern is to educate people to value their cultural heritage and help them to preserve it. Our schools, too, now boast of a work education programme, that seeks to introduce young people to various handskills and through these to their environment. Apart from these there are some private and public organisations that have come forward to patronise crafts and village industries for some reason or the other.

Taken together that is an impressive tally. If they all got together and had the right perspective and a united plan of action they should be able to make substantial progress in the directions required; as their professed objectives cover almost all the aspects of the problem — the protection of our heritage, its study, the compilation of archives of information and museum collections, the healthy extension and growth of the living traditions in the new circumstances, the education of the youth and the enlightenment of the general public and eventually floating the vision of a world that will encourage individual creativity.

Unfortunately this has not happened. Each organisation is taken up with a narrow objective and does not have any truck with the other. And most of them do not seem to have a sound enough understanding of these arts, their specialities, their work structure and the factors that contribute to their growth or decline. Many of them have not, apparently, made any serious effort to reason out even their small agenda and work out a definite strategy.

The work experience programmes in the schools, possibly drawn up on the models of courses in certain foreign schools offered a long list of alternatives which few Indian schools had facilities for, or had the means enough to provide them. And they steered clear of the local craft skills which the rural schools could have taken advantage of. And the time provided was too ridiculously small to show any results. So it has been, I understand, a fruitless exercise.

Similarly the INTACH, for all its efforts to save our heritage, has bypassed its main requisite. Our countrywide heritage cannot be saved unless the generality of our people want to save it; so its first focus should have been on awakening and educating their interest and appealing to their sense of self esteem. And in this endeavour enlisting the

cooperation of local agencies who communicated with the people on the spot would have been better. But being a largely upper class organisation this does not seem to have a great priority in its programme. Nor has it mapped the whole scene or compiled the necessary archives. It has without doubt, done some useful work, like restoring some sites and buildings and works of art. But it does not take much time for a restored site or building or work of art to decay and get back to the state it was, if it is not well looked after. The much-publicised Ganga Action plan has not been able to achieve what it wanted to, despite much effort and expenditure, for this reason; it does not command the continued support of the people on the banks of the river and the local administrative agencies.

Coming to the three other organisations which have been there for over forty years, they are all ruled over by bureaucrats and marketing experts whose main interest is increasing production and sales. They do not seem to be so much concerned with the health of the craft or the welfare of the craftsmen which can be seen from the fact that the craft-goods are deteriorating in quality and design and most craftsmen, seeing that their earnings are not commensurate with their gifts and skills, do not want their children to continue in their profession. Most of these officials cannot see apart a limited fabricational expertise from one that has larger inputs of skills and personal sensibility; they put them both under the same pressures, asking for more production and cheaper goods. This makes the specialised crafts more and more pedestrian and denies the craftsmen the job satisfaction (or creative delight) which they prize more than their wages. They also give them wrong briefs and force on them the wrong advisory personnel. I have come across instances of their asking the brass-workers of Bastar (who have their own distinct imagery and workmanship) to copy cheap figurines sold on the Banaras streets. I have seen them employing fresh graduates from the art schools (who have no understanding of or enthusiasm for rural arts) as designers; most of them ruin the craftsman's work with the most inappropriate suggestions. From time to time they billet on the craftsmen foreign designers who are too aggressive or individual to learn the language of their craft, and whose condescending advice not only produces some atrocious hybrids but also interferes with the inbuilt balances of the craft practice; a fashion designer from England did considerable harm to the *ikat* weavers of Orissa by persuading them to come out of their geometric grids. One can cite many instances of such ignorance or misjudgement. This may be largely because these officials had nothing to

refer back to; nor had the drive and the wisdom to gather the needed information by themselves. So even if these organisations had some exceptionally gifted motivators and advisers in the beginning, their counsel, taste and vision have not left any lasting impact.

This is probably understandable in the context of the reckless commercialism of the consumer society we are driving towards. But if we want to save the crafts, the craftsmen, and the craft culture in general, we shall have to enlarge our perceptions about them and create the circumstances that can sustain their healthy growth. A production system that is able to take the fabrication of a functional object to the borders of art and encourage in-process innovation and, at a further step, relate meaningfully with the user public and the total environment, is not something that can be left to lapse.

Artisans indigenous knowledge : its relevance for development

Jan Brouwer

Introduction

On the 9th of April 1976 I had an unforgettable evening with the founding mother of studies on Indian handicrafts, Kamala Devi Chattopadhyay at her residence in New Delhi. She presented to me an autographed copy of her book *Handicrafts of India* which inspired me to undertake a journey into the minds of the artisans. For, in the opening section of this book, she wrote : "...craft is an expression of the human spirit in material form". (Chattopadhyay 1976:1) This meeting marked the beginning of my studies on material expressions of thought whose relevance extends beyond academic and aesthetic interests into the practical realm of development.

During the past 50 years, many works on the Indian artisans have appeared. However, most of these are either economical or historical, art-historical, indological or aesthetical studies or focus on technical aspects or study of a particular craft in isolation. Among the few anthropological/sociological studies one rarely finds a study covering both the cognitive and empirical domains of the crafts and craftsmen.

In this paper, then, I argue for a holistic approach to the subject aimed at an understanding (and not mere knowing) of the artisans' perceptions of production and society and the economic concepts on which their actions are founded.

The argument is based on a study of the Visvakarma artisans of Karnataka comprising blacksmiths, carpenters, copper-smiths, sculptors and goldsmiths. Its starting point is the artisans' cultural ideology as it comes to us in their oral tradition, material culture and actions.

In the following section (Two) a summary of the Visvakarma cultural ideology is given. In section Three I shall present an analysis of the practices and their underlying concepts. Within the limited space available here, I shall restrict myself to the case of the goldsmiths. For similar analyses of the other Visvakarma crafts I may perhaps refer to my article (1997a). Section Four discusses textual references to indigenous economic concepts as they come to us in three Visvakarma narratives. In the concluding section (Five) I argue in favour of the Indigenous Knowledge approach to the subject. This implies superseding conventional seperations of academic disciplines. Only in this way, I believe, the case of the artisans can be understood while doing justice to the human agent and his right to order his own world[1].

Summary of Visvakarma Ideology

The Visvakarmas[2] find themselves among such other manufacturers as potters and weavers for which the classical theory of varna categories does not provide a reference. This well-known theory comprises the four orders Brahmin, Kshatriya, Vaishya and Shudra, which have been roughly identified with priests, warriors, traders and workers. The manufacturers, who set upon an existing, natural order of elements to obtain material which they transform into cultural artifacts, have thus no fixed point of reference in pan-Indian literature. In this situation they choose either the Brahmin or Kshatriya category to locate their position in the world[3].

The Devanga weavers and the Visvakarmas claim the Brahmin status although their respective crafts differ, while small groups of smiths and carpenters claim the Kshatriya status unlike their counterparts of the Visvakarma caste. The weavers, like non-Visvakarma smiths and carpenters thus place themselves in the vertical hierarchy of caste in the society. The Visvakarmas cope with this problem in a unique way: as a horizontal unity of five crafts they have stepped out of the world and at once back into it.

The Visvakarma ideology, which is on par with the Brahminical order, presents a unitary and static picture. As such this ideology is a contrast to the Visvakarmas' actual situation of diversity, change and fragmentation.

The Visvakarmas' oral tradition exemplifies the dialectic tension between the unitary ideal of caste and reality of inequality and difference

between the sub-castes. In the narratives of the Visvakarma tradition, the ideal order is placed outside the world. Here we find an essential, if not unbridgeable breach between the social ideal and the actual situation of the artisans in the world.

The Visvakarmas of Karnataka consider themselves to be the descendants of the mythical Lord Visvakarman, mentioned in the *Rig Veda*. They equate Lord Visvakarman to *Parabrahma* who is above Brahma from whom the Brahmins descended. Painted or printed pictures show this Visvakarman with five (coloured) faces and ten arms holding ten different, often violent attributes, while below Visvakarman there is a picture of a cow and a tiger and the line *ahimsa paramo dharmah*, which means 'non-violence is the supreme way of life'.

The Visvakarma ideal is concerned with autonomy and completeness, while it gains significance through the homology between Lord Visvakarman and the Visvakarmas in the real world. The ideal Visvakarman has no relationships at all; he simply 'is'. He is self-contained or an image of autonomy. In the world, this is expressed as a 'kingly' aspect of not being sub-ordinate, of being socially and ritually independent.

The ideal of completeness conceptualizes the universe as being composed of a static male and a dynamic female constituent part. The Visvakarma craftsman himself, being the worldly counterpart of the heavenly Visvakarman, is an image of the universe. Through the imagery of tools, the participants conceptualize their workshops also as an image of the universe and finally, their (main) finished products are images of the whole universe (visva).

According to the artisans' ideal order, 'Visvakarman is Goddess *Gayatri* and *Gayatri* is Visvakarman' and thus, at the highest abstract level, there is identification of the male principle (the Lord) and the female principle (sakti). Each of the five archetypical craftsmen (*Manu, Maya, Tvashtri, Silpi* and *Visvajna*) has his own sakti; they are five different manifestations of the single Visvakarman. They were the five Visvakarmas of the origin myth (see the Fort Story, Annexe), who are all one (*ella ondu*). This ideal order is complete, cold and static: the static male part keeps the (potential) dynamic female part in check.

In the worldly order, the Visvakarmas have a relationship with the Goddess through either sacrifice or worship. This situation, in which the

unity of the Visvakarma and sakti is broken, came into existence through the manipulated interference in the ideal order by a dynamic and violent Goddess, who is no longer *Gayatri* but *Kali*. She protects the Visvakarmas who have lost their unity in the world.

In the section that follows, the transactions in the goldsmiths' real life will be discussed, aimed at an understanding of the concepts on which their practices are based.

Perceptions of Production : Goldsmiths' Transactions

The case of the Visvakarma goldsmith shows that his constrained connection with society, expressed through time, finds its origin in his perception of Self and Society. Elsewhere I have presented the Visvakarma view on Self (as a group) and Society at length. The most significant finding is that the Visvakarmas consider the Self as Life in contrast to Society as Death (Brouwer, 1997b).

The crux of the Visvakarma artisans' cultural ideology is the view that ultimate liberation and prosperity should be reached without any attachment to the world. Hence relationships should be denied (for example through intervention of a deity) or made incidental (for example through the use of money). The artisan finds a solution for his problem in a relationship with the Goddess who provides him with Time. Concomitantly, this explains his ritual donations and honoraria (*dakshine*) to her as the term indicates: a payment in exchange for a ritual service. Interestingly, the word for a gift to the Goddess is not *kanike*, but *dakshine*. The latter is cognate to *dakshina* which is associated with death. The goldsmith and the Goddess thus exchange life and death. At the same time, the complementary opposition contains a contradiction: the mediating role of the Goddess. The Visvakarma perception of society in terms of death seems not to be an isolated one. Galey demonstrated that the debts of men resemble debt toward death and that the world is ordered by debt. The relationship between death, debt and society seems to be a key perception in the indian indigenous knowledge systems. (Galey, 1983)

The other important connection is the one the goldsmith has with the shroff. The goldsmith receives principal raw material from the shroff, as well as money. He thus receives the Goddess (in her material manifestation) and does not return the gesture. He cannot and should not

present a gift to the shroff, as the latter, like all non-Visvakarmas, belongs to Society (Death).

This observation has two implications: (i) the goldsmith returns the gift from the Goddess by offering presentations to her temple in the direction of ever flowering life, while (ii) the money received from 'death' terminates the relationship of exchange.

From the shroffs I learned that the goldsmiths never actually repay loans that they have given to them. (The average outstanding loan is about Rs.30,000/- per goldsmith per year). Of course, the goldsmith cannot repay a loan, for this would imply a form of reciprocity which once received would end the social relation attached to it. Would he repay the loan, it would mean recognition of the relationship. On the other hand, the shroff is not keen on repayment of outstanding loans. For him it is through lending debts that he has command over men, and more precisely, over the best goldsmiths.

In this context, it is also possible to deduce the views on profit. The shroff makes his profit (*labha*) by buying gold at cheaper rates than the official one, and by selling jewellery to his customers. He thus makes profit at both ends of the process of a deal. The margin of his profit links him with society. In the shroff's view, money creates a relationship: the more he pays the goldsmith, he thinks, the better and more he will work for him; the smaller the margin at selling time, the better his relationship with the customer.

In contrast to the time of profit making by the shroff, the goldsmith makes his profit within the process of manufacturing (the wastage [*tyamana*] and the wages [*majuri*]). Together wastage and wages are his profit called *labhadevi*, which literally means 'added by the Goddess'. The temporal process of transformation of substance (gold) into form (product) is thus the result of a cosmic exchange between the male and female constituent parts of the universe and not the result of a worldly transaction.

A closer look at the dialectic relationship between the ideal Visvakarma placed outside the world and the Visvakarma craftsmen of the social world reveals the way in which the Visvakarmas cope with the fundamental break between the two orders. The ideal concept of the universe constituted by a male and female part, becomes a complemen-

tarity of the male, female and neutral in the world. The place of the ideal Visvakarman is, in the world, taken by the craftsman specialist and generalist. The unavoidable use of external agents in the world is then either mediated by the Goddess or denied by making them incidental.

The Visvakarmas conceptualise the Self (as a group) and Society in terms of a transcendent completeness. On the boundaries of the transcendent order of the Self and mundane order of Society for which they manufacture their products, the Goddess *Kali* is drawn to square the circle of completeness by her dynamic effectiveness.

The finished products of four crafts are not complete products at the time of delivery[4]. When a product is ready to be delivered, the craftsman calls it 'finished' ('I have finished [*mugiside*] it'). This is an original Kannada word from the verb *mugisu*, which means 'to conclude' or 'to finish' and as such it is used. The semantic value of *mugisu* does not stretch to include 'to complete'. For the verb 'to complete' and the adverb 'completeness', there is only a Sanskrit loan- word in Kannada, which is textual rather colloquial (*purna* or 'complete', 'perfect'; *purana* or 'completion'); or *pari-purnate* or 'completeness', 'entireness'. The participants use these terms in the context of the mythological Lord Visvakarman.

The distinction the artisans make between (i) finishing a work and completing a work, and (ii) between the use of these two terms in two different contexts (textual versus colloquial) adds to our understanding of their perceptions and actions concerning the delivery of their product. The carpenter's bullock cart does not yet carry the final linchpin; the peak (*kalasa*) for the temple tower does not yet include the iron rod to fix it, the eyes of the temple idol (*murti*) still remain to be opened with the black for the pupil, and the wedding necklace still lacks the black beads (*karimani*). The craftsman hands over each of these products to the respective patron sometime before the patron is going to use them. The time lag between delivery of the product and its functioning in the world may vary from craft to craft and from patron to patron. Shortly before pressing the product into service, the patron conducts a ceremony during which the craftsman actually completes the product (putting the linchpin, fixing the peak, opening the eyes, attaching the beads).

Naturally, after having delivered his incomplete product, the craftsman engages himself in a new work (*kelasa*). After sometime, while

this work is in progress, he receives a call from the previous patron to attend the ceremony to complete the previous one. The craftsmen call it a 'new work'. In our words, each work - the old one, the new one, and the completion of the old one - is considered to be a separate assignment. Thus, the manufacturing of a product up to its delivery and the making of the product ready for functioning are viewed as two different assignments.

This system of breaking up a single production into two different assignments is not restricted to the members of one caste (Visvakarma) or to so-called traditional artisans. In modern construction work, carpenters, masons, plumbers, electricians, glass setters, painters, polishers and similar artisans of any caste background follow the same system.

In its most simplistic form, the reasoning behind this "splitting system" is thus: the transcendent order is the order of completeness and perfection. It is placed outside the world where human beings like you and me only reach on their death. The avoidance of completion and perfection is thus one of avoidance of death. This is to be seen both metaphorically and sociologically. For during the time lapse between 'finishing' and 'completing' a product, the artisans start up a new work for another patron. The cultural ideology is thus inseparable from the mundane survival strategy: here the domains that in the Modern State are separated, are intertwined.

The perception of society in terms of intertwined domains follows directly from the world-view. As the case of the Visvakarmas demonstrates, the transcendent order is the order of virtues, completeness and perfection, are the qualities for which there is no place in the world.

Indigenous Economic Concepts : Textual References

Thus, the artisans, particularly the Visvakarmas, perceive (a) production and consumption as belonging to a single discourse; (b) division of labour as a metaphysical aspect of the ritual domain; (c) cash not as a means of connection, but as a means of disconnection, thus strengthening the ritual domain; (d) profit being made during production and thus as a leftover of ritual; (e) investments and decisions as cultural ideological abstractions.

In the Visvakarma oral tradition there are a few stories which make

economic statements. They are the origin myth of the caste called the Fort Story (Brouwer, 1995 : 217); the settlement story of the Visvakarmas of Channapatna in the Bangalore district (*ibid* : 296) and the Mirror Story of the Visvakarma Uttaradi sub-caste of southern Karnataka (*ibid* : 338). Elsewhere, I have given the complete text of these stories and their analyses (Brouwer, 1995). With reference to the aforementioned publication I shall re-read these stories here from the vantage point of our economic topic.

In the Fort Story, all Visvakarmas, pure and united, lived in a solid, magnetic fort, which could not be destroyed by anything. The Visvakarmas of the Fort were learned men and manufactured products by magic. Bringing erudition and magic power together, the story expresses the Visvakarmas' status of purity by superseding such wordly distinctions. In this 'splendid isolation' they could afford to deliver their products to the world without any returns. They neither received goods nor money for their products. Barter would bind them and thus contradict their pure status, while money being viewed as neutral or 'valueless' would not be necessary as they are already disconnected from the world. Finding themselves already at the pinnacle of purity no monetary means are required to enhance their pure status.

The analysis of the Settlement Story of the Goddess *Kali* of Channapatna shows the differential conceptualization of money; the perception of society in terms of intertwining domains and leads to the formation of the indigenous concept of development.

Using the motif of bangles in an elaborate pattern of exchange, the story develops a social, economical, and historical argument. The developments are each time initiated by the female figures (the Goddess, the smith's wife, and the queen). The male figures (the bangle seller, the smith and the king) only act as a result of female initiative.

The syntagmatic chain of the myth is formed by three transactions with the bangle seller, the soil, and the king. Each transaction covers paradigmatically the economical, social, and historical domains.

The first transaction is concerned with the control of the unaccompanied deity by the male principle through the bangles, which the bangle seller puts on the arms of the Goddess. This is not a simple transaction, for the bangle seller (*setti*) has to be paid.

The Goddess orders the *setti* to collect the money due from the eldest person of a Kulachar Visvakarma[5] household. This suggests that he is the leader or representative of the Visvakarmas. Although they had money, the Visvakarmas paid for the bangles only after an order of the Goddess (first dream sequence). They can give the money to the Goddess, but not to the *setti*. For, in the Visvakarma view, society (to which the *setties* also belong), is classified in terms of death.

The first transaction also marks the beginning of the journey of the Goddess. This journey is the result of a mutual attraction of the Goddess and the king. She herself asked for bangles and he prayed for her help.

The various meanings of the first transaction relate to the three domains. Through the action of the Goddess, the Kulachars were forced into a monetary relationship with society. Otherwise they would not have done so and their money would have been given only to the deity.

On the social level, the Kulachars and the *setties* are juxtaposed in relation to the Goddess. As wanderers, the *setties* built her shrine outside the village, so to speak, in the wilds where the unaccompanied, hot Goddess was wandering without bangles. The Kulachars built a temple for her in the bazaar : she is now enshrined although still dangerous.

With the payment for the bangles, the second transaction is concluded. It is the Visvakarmas who dug the soil to move the deity across the boundary of wilds. Subsequently they built her a temple. Both activities are solutions, and therefore, typically kingly.

Finally, both the Visvakarmas and the *setties* had difficulty with the payment for the bangles. But their difficulties are significantly different. The Visvakarmas had the money, but did not want to pay and did pay at last on order of the deity. The Goddess thus mediated between them and society. From their savings they paid and thus the money in their possession became less.

The *setties* had kept the money received from the Visvakarmas and when needed it had multiplied. They had not to pay, but immediately decided to spend it on the construction of a pond and platform for the Goddess.

This transaction leads thus to various results. The *settis* gain a customer, as well as prestige by constructing a shrine. The Kulachars are

partly drawn into the money economy. The dual nature of the Goddess gets shape: she has a platform in the wilds and a temple in town.

In the final transaction, the Kulachars move the Goddess once again on her orders (second dream sequence). This time she gets a temple inside the fort. The Goddess is now completely pacified.

For the Kulacharas, the movements of their *kuladevati* express a socially upward mobility. But the final result is tragic: although they gain the Goddess, they lose her to the king as she dislikes the noise of their craft. Once again the *setties* are the winners, for the royal couple belong to their caste and the queen was cured. On the social level, the story places the *settis* below the Visvakarmas, because the *settis'* shrine is built at the place of the uncontrolled, hence violent manifestation of the Goddess.[6]

The *setties* are represented by two female figures (the mother and the queen) and by two male figures (the bangle seller and the king). This choice signifies that the *setties* are placed right inside society. By contrast, the Visvakarmas only appear as male actors, while the Goddess appears twice in the smith's dream. In the Visvakarma view, the smith and the Goddess are taken together as the male and female principle of the universe (see: Brouwer, 1995). The Goddess belongs thus as much to the Visvakarmas as to society. The relationship between the male and female figures of the *setties* is only slightly different. The mother of the bangle seller and the queen can be seen as manifestations of the Goddess. For the episodes of the pulses turning into coins and the gaining of eyesight reveal divine capacities. It is in this difference that the difference in caste ranking is expressed. The story places the Visvakarmas higher than the *setties* for the former have a direct relationship with her.

Although clearly dated by the name of the late 16th century ruler of the town, it is a dynamic narrative. But the message of the myth is not one of the 16th century alone. It only indicates the beginning of a period of rapid economic change. For the episode of the forgotten coins suggests a time lapse. And of course, one shrine and two temples were built, activities that in the period under consideration could not have taken place overnight.

With the help of the three male and three female actors, the story not only shows the process of encompassing the new economic order in the locale, but also the continuity of the basic relationships of Indian polity.

Considering the end of the narrative, which finds the Goddess at last shifted to the fort near the king, it may be concluded that she had attracted the king and their king also felt attracted to her. Apparently, the king on his own did not have the power to cope with the situation of incipient change. It is the Goddess who initiates the actions that lead to a peaceful new situation. Although the king's power must have been vindicated by the Brahmin, like elsewhere (see Heesterman, 1985:1-25), this is not sufficient to make this recognized power effective. It is here that the Goddess comes in. The political universe is made up of a male (king) and female (Goddess) principle, which only in its completeness is capable of holding the balance, in this case, between the Right and Left Hand castes.

However, the Goddess is not only a political functionary, as the spatial and temporal dimensions of her journey indicate. Both the iconography of the deity and the architecture of her abode are important. At her first appearance the Goddess is incomplete in two ways: she has no bangles and is unaccompanied. Moreover, she is hot (violent, dangerous), for she is dug up with the help of tender coconut and she is located in the wilds. Comparing the two idols in town, it is seen that the *Kali* of the bazaar holds weapons of attack, while the *Kali* of the fort has weapons of control.

Where she was still alone, albeit enshrined, in the *bazar*, she is finally accompanied in the temple in the fort. In her earlier manifestation, the Goddess is not served by a priest, but worshipped by the non-vegetarian Setties and Kulachars. Field reports confirm that the early Goddess accepted non-vegetarian offerings. Once in the *bazar*, and later in the fort, the deity is vegetarian and served by a priest of the Uttaradi sub-caste.

In sum: the Goddess undergoes a series of important transformations: from unaccompanied to accompanied; from a mobile hot to a static cold; from an incomplete to a complete state; from the wilds to the fort; from lack of a servant to being served by a priest; from non-vegetarian to vegetarian; from a dangerous wanderer to a pacified settler. In the course of her transformation, the Goddess introduces monetary transactions in society, and specialization (in terms of priesthood). More specifically, she draws the Visvakarmas into the wider monetary system.

The Mirror Story embodies also the Uttaradis' perception of the market and concept of money. In this narrative the protagonist chose the

merchant's disguise and opened a shop. Money is depicted as clean and pure enough to establish a relationship with the Goddess. The story explains why the Uttaradi goldsmiths should not open shops as their sales failed when they did. At the same time it places their relationship with the Goddess through their 'elder brother', namely, the Kulachar subcaste. It seems to me that the main point here is the implications of having a shop. In the shop one makes profit at selling time (like a shroff) that is after the manufacturing process when the product is completed.

Conclusions

The starting point of my holistic approach to the study of the craftsmen was their oral tradition. The Indigenous Knowledge System as far as relevant in the case of the artisans, was viewed from the vantage point of the economical domain. The analysis revealed a logical consistency between ideology, stories and actions.

In the foregoing sections we have seen that the Visvakarma artisans' cultural ideology places the ideal outside the world in the transcendent order of non-violence, unity, virtues and perfection. Here the worldly distinctions such as between male and female, high and low, pure and impure, are superseded. The core concepts of the ideology are autonomy and completeness.

Between the ideal and the real situation of life and craft the Goddess is drawn to square the circle. Both the stories of the Visvakarma oral tradition, as well as their actual transactions in the world show that the Goddess is given a place between the Self (as a group) and Society. This implies a perception of society in terms of intertwining logical domains of reference. The discrepancy between ideal and actual situation is bridged by the journey of the Goddess, expressing the indigenous concept of development : purity.

The ideal of completeness being placed outside the world in the realm of purity and perfection leads in the world to a distinction between a finished product and a complete product. This is the conceptual background to a practical survival strategy in which orders are split into different assignments. This "splitting system" has far-reaching consequences for the modern notions of division of labour, quality of end product, delivery schedules and management of production.

The unbridgeable gap between ideal and actual situation leads in the

world to a trinary stucture of the Self, the Goddess and society. In turn this implies the perception of intertwining domains[7].

The aforementioned gap as well as the perception of society shows their own dynamics in the manifestations of the Goddess. These reveal the indigenous concept of development.

The transactions that take place in the stories and in the real life of the craftsmen reveal the indigenous concepts of money and profit.

Thus, for the artisans: (i) money terminates a relationship; (ii) a loan need not always be repaid; (iii) profit is made during the manufacturing process or at the time of purchasing raw materials; (iv) the eye for detail and quality as aspects of perfection is placed outside the world; and (v) the survival strategy is linked with the unfinished product.

Not long ago the sociologist Maurice Bloch and co-author Jonathan Parry, the anthropologist, wrote that "anthropologists, historians and sociologists have commonly fallen into the trap of attributing to money in general what is in fact a specific set of meanings which derive from our own [European] culture." (Parry and Bloch 1989:1). And indeed in the western cultures as well as in the view of the modern state outside Europe, money is perceived as a means of exchange implying a social relationship between giver and receiver. On the five points given above the modern economic and development concepts differ considerably, so that the modern development schemes for artisans appear to them as virtual reality.

The future of the crafts and the craftsmen depend thus on a recognition and understanding of indigenous economic concepts. Development programmes and projects for artisans will be successful if the participants indigenous knowledge defined as cognitive facilitator for development is taken into account. This can be achieved through a study of concepts underlying the practices of both the craftsmen and the programmes aimed at a conceptual matching. Success of the programmes for the artisans then depends on the degree of the participation of the voiceless artisans in design and implementation of the programmes.

NOTES

1. This contribution is partly based on my paper "Conflict between Modern and Indigenous Concepts in the Small Enterprises Workplace" read at the Cochin University of Science and Technology in December 1997.

2. For an extensive presentation of the Visvakarma cultural ideology, see Brouwer 1995.

3. Ethnographic reports are replete with examples of manufacturing castes which claim one of the two highest status categories. The status claim as a means of self-identification of a group *vis-a-vis* society is a 'state of mind'.

4. Although the carpenters, coppersmiths, sculptors and goldsmith quote their patrons as saying that they conduct the 'deliverypuja' for their prosperity, it is the Visvakarma perception of his craft and his position in the world which demand this puja and his activity therein. Notwithstanding the similarity in performance of the deliverypuja and the *ayudhapuja*, the structural position of the ceremony is different. Here I observe a cogruence between the Visvakarma view and the general perception prevalent in society regarding iron products. And of course, the blacksmith does not need a puja, for his relationship with the Goddess is not one of the 'worship of sacrifice', which puja literally means, but one of sacrifice itself. (See : Brouwer, 1997)

5. In southern Karnataka the Visvakarmas are distributed over four sub-caste, namely, the non-vegetarian Kulachars and Matachars, and the vegetarian Sivachars and Uttaradis.

6. The meaning of the three transactions can be placed in a wider ethnographic context. The ruler of Channapatna belonged to the Banajiga caste of the bangle sellers. According to various authors (Dubois, Rao, Beck), they were the leaders of the Right Hand castes. The Visvakarmas were the leaders of the Left Hand castes in this region. With the roots of this division probably economic (Beck, 1973:391), it was the king's duty to maintain the balance, particularly in a situation of an upcoming market economy. In a situation in which the market forces supersede the system hitherto prevalent, there would have been every reason for an intense dispute between the leaders on both sides.

7. Few authors have noted the intertwining domains as a fundamental feature of Indian society. Thus Galey focusing on the indigenous concept of debt in northern India concludes that its "economic aspect, explicit and familiar to us, is however misleading, for it is accompanied here by a political dimension, and at the same time presupposes a more fundamental moral value. The agreement that binds debtors and creditors concerns less the repayment of the loan itself but rather defines mutual obligations of a broader nature" (Galey, 1983:67). Ostor observes in eastern India that "the domains of kinship and family, politics, economics, religion, and ideology are culturally and historically constructed forms" (Ostor, 1984:186) Kolff in his study on the Indian 'military labour market' states that "concepts such as nationalism, bureaucracy and the labour market, though of universal validity, may have an importance in the configuration of Indian society and civilization which is different from its importance elsewhere, just as the linkages between the elements of the structure may be different in India." (Kolff, 1990:193) Discussing indigenous knowledge in agriculture, Ludden concludes for southern India that the political, ritual and technological domains are intertwined with the indigenous term for agriculture (vellanmai) being formative. (Ludden, 1992)

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ANNEX : THREE VISVAKARMA NARRATIVES

1. The Fort story

"At the time the kings were jealous of each other. But they also hated us for our capabilities and skills. We were the best craftsmen and nobody could improve on our work.

"The kings caused a lot of difficulties for us and we decided to retire into a well-protected place. So, we built a fort. It had to be a very solid fort, a magnetic fort that could not be destroyed by anything. We succeeded, but the fort could still be conquered by means of *haraka* grass. If one were to put a ring of this grass around the fort and burn it the steel fort could melt. There were automatic gates of the fort, which opened at sunrise and closed at sunset.

"All the Visvakarmas in the fort were very religious and lived a pure life. It was a happy kingdom of only Visvakarmas. They were a devoted

people who began their work only after morning prayer and meditation. These prosperous Visvakarmas were engaged in five crafts : blacksmithery, carpentry, coppersmithery, making sculpture and goldsmithery. In the daytime, when the the gates were open, they went out to deliver their products and returned before sunset. Nobody else was allowed inside the fort.

"The Visvakarmas had not only a great scientific, but also religious knowledge, especially of the Vedas. Thus they enjoyed high esteem.

"However, the Brahmins, who were the *de facto* rulers (besides the kings), became jealous. One of them, *Vedavyasa*, conspired with the other Brahmins and they did their utmost to attack the fort. They failed because the fort could withstand weapons of all kinds. Therefore they contemplated a trick. One of the Visvakarmas should fall in love with one of their women. *Vedavyasa* had a beautiful daughter, who was prepared to seduce one of the Visvakarma gatekeepers and to filch the secret of the fort from him.

"A gatekeeper fell in love with that girl and took her home. She cared for him with devotion. One night, while the gatekeeper slept, she screamed. 'The fort is bruning!' He awoke and said : 'This cannot be true. Who brought the *haraka* grass?' She replied : 'Nobody brought that grass. I only made a joke. Do not worry, nobody has the intention to destroy the fort.'

"The next day she returned to her father and brought him the secret of the fort. Immediately *Vyasa* took action. He collected as much *haraka* grass as possible and burnt the fort.

"Many Visvakarmas fled, particularly goldsmiths, but a few remained of whom most were blacksmiths and carpenters. Those who stayed on were called *purvajas* (ancestors). Those who fled were called *uttaradis* (latecomers or those coming from the north). Much later the *uttaradis* and the other Visvakarmas asked the *purvajas* the names of their gods and gurus. They found they worshipped the same deities and holy men and so they stayed with them."

2. The Kali temple myth of Channapatna

"Once a Balegara *Setti* from his place was going to a village to sell bangles. On the way he heard a voice coming out of the ground saying

'Put bangles on ...' He was puzzled and looked round. Then he saw two arms coming out of the soil. The voice asked him to put bangles on them. He was even more puzzled when the voice said : 'I am *Kalikamba*, the *kuladevati* of the Visvakarmas. You need not be afraid of me, put bangles on my arms. Hearing this with fear he put bangles on those arms. Again two more arms came out of the ground. He was still more afraid. 'You need not be afraid, put the bangles on', he heard again. And once again he put bangles on those arms.

"The *Kalikadevi* sent the bangle seller to the Iron Club Street. 'Go to that street. There is a house belonging to one of my devotees. They have kept some money aside for me to give as an offering (*kanike*). You go and get that money for your bangles.' She directed him to the house and gave the name of the eldest person of the household.

"In fear, the bangle seller returned home. The next day he went to the house that had been pointed out to him and told everything to the eldest person of this house. He said : '*Kalikadevi* has told me like this'. The elderly person did not believe him and made fun of the goddess after which he sent him away. That night the goddess *Kalikamba* appeared in the eldest person's dream and said : 'You have made a mistake. You did not pay the price for the bangles I am wearing. You have insulted him : you must pay. I am still in the place where I got the bangles. Take me out of the soil, bring me to the town and build a temple for me. Worship me inside the temple.' The following morning, he gave the money which was set aside for the deity to the bangle seller.

"He took the money and got a small pond of drinking water built. Thereafter, the Visvakarma elders took him to find the place where he had heard the voice. They loosened the soil, by means of tender coconut milk, and removed it with their fingers. The idol of *Kalikadevi* appeared. They brought it to their place, built the temple in their own street (Iron Club Street) and installed the idol there.

"The spot where the goddess was taken out of the soil was marked by a small platform on three stones (called *balegaranakatte*) which can be seen even today. It was the bangle seller who built it. Why did he build it? Look! The three coins, which the ancestor had given him, he had in turn given to his mother to keep for him. At that time she was winnowing bengal gram. When she stored the gram in a vessel, she accidently mixed the coins with it. Later she forgot about them. Two days later her

son asked her for the money and she said : 'I do not have any money'. Then her son reminded her: 'I gave you three coins two days ago. Give them to me now.' Then she said : 'Yes, you gave them to me, but I do not remember where I put them, 'The son reminded her. 'I gave you the coins when you were winnowing the gram.' She then remembered and thought that she must have put them in the vessel in which she had stored the gram. She went to look for them. The whole vessel was now filled with coins. With that money the bangle seller built the pond and platform.

"At that time, Channapatna was ruled by a Poligar called Jagadevaraya. His wife was blind. So the Poligar prayed to the goddess (Kali) to grace his wife with sight. If she did so, he would build a temple for Kali inside the fort itself.

"About the same time *Kali* appeared in a dream to one of the Visvakarmas and said : 'I have granted sight to Jagadevaraya's wife and he is going to build a temple for me inside the fort. So, keep me in that temple, for it will be calmer and without the noise and disturbance of the Iron Club Street.' The Poligar also appeared and said : 'My wife has been cured and I am going to build a temple inside the fort for Kali. Will you please install the idol of the goddess in that temple.' And our people followed the instructions."

3. The Mirror story

"In Kasi (Benares) there was a (Visvakarma) couple called Visvacharya and Sriyamdevi. They were very poor, but had five children. According to a local royal custom, when the king of *Kasi* died, his successor would be the one who was garlanded by an elephant. Among the people gathered for the occasion were Visvacharya's five sons. The elephant garlanded his eldest son. Thus, the children of Visvacharya became the king of Kasi.

"At the same time, Vishnu Chola was ruling Kanchi in the south. The news that someone else had become the king of Kasi made him jealous.

"The two younger sons of Visvacharya desired to visit Vishnu Chola's kingdom. Their father advised : 'Go to Kanchi in the disguise of merchants (tradesmen) and do not fall, at any cost, for the passion of women.' They went to Kanchi where they opened a shop by the side of the Kamakshi temple. In front of their shop, they had hung a mirror of precious stones (*rannadi kannadi*).

"Soon the shop became popular. Meanwhile, the daughter of Vishnu Chola had heard about the two very handsome shopkeepers. On the pretext of visiting the temple, she and her servant came to see the mirror. At least she pretended to buy the mirror. When the two brothers asked money for it she told them to send their servants to the palace to collect the amount due.

"Several times the brothers sent their servants to the palace but in vain. At last one of the brothers went there himself. The princess had given orders to send the shopkeeper, if he came himself, to the seventh floor where she, beautifully adorned, would be awaiting for him. When the shopkeeper met the princess she hugged him instead of giving him the money. He got angry and threatened her with an 'army of evil powers' (*bhuta sainya*) and other invisible military troops.

"In the fight that followed, the two younger brothers were killed and the king of Kanchi defeated. Then, the king of Kasi arrived at Kanchi and took the mundas ('parts of the body above the neck') and rundas ('parts of the body below the neck') of his younger brothers, to the Kamakshi temple and asked the goddess to restore their lives (*jivadhana*), which she did.

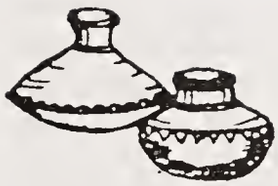
"These two younger brothers are called the heroes of Kanchi (Kanchi *viraru*). As they were murdered on the first day of Ugadi, the Visvakarmas do not wear new clothes on that day, which virtually means that they do not celebrate the festival.

"King Vishnu Chola had seven wives and two ministers. One of these ministers had advised the king to punish the brothers. However, the other and more intelligent one, as soon as Vishnu Chola was defeated, took his king's seven wives to the king of Kasi to beg for their husband (*patti bikshe*). The king of Kasi only said : 'Give the money or return the mirror', upon which the seven wives returned the mirror.

"When Vishnu Chola came to know this, he and his other minister thought to give trouble to the two brothers. They ordered them to be buried up to their necks and then to be trampled by elephants. But because of their divine power they remained alive.

"The king of Kasi understood immediately what Vishnu Chola and his minister had done to his brothers, and asked the goddess why she was quiet while his brothers were suffering. The goddess replied : 'Do

not grant *patti bikshe* to the seven wives, but grant them the status of women whose husbands will live long (*dhirgha sumangali bhava*).' Thus the eldest brother spared the life of Vishnu Chola although he had given much trouble to his younger brothers."



While the potter turns the wheel India lives her tradition fully

Baidyanath Saraswati

I was just tagging along
In the wake of the world.
Then the Satguru Nirmal Bose
Met me on the path.
He put a Lamp in my hand
And said, 'Go to Potter's India[1].

The Original Act of Cosmogenesis

Creation as sacrifice

The Indian vision of creation can be traced from the Vedas and the Brahmanas to the Upanishads. The *Nasadiya Sukta* (RV X, 129) reveals the primal mystery that transcends all categories. Another hymn (RV X, 121) discloses the 'womb' of the ultimate by a powerful symbol of *Hiranyagarbha,* the Golden Germ, which becomes Father of the Earth, Father of the Heaven, Father of the shinning Water, Father of all Beings. The *Purusa Sukta* (RV X, 90) finally reveals the character of creation–sacrifice in which the whole universe is involved. The cosmic Purusa performs an act of self sacrifice so that the universe may come into being. From his limbs come all things both animate and inanimate : animals of every type, liturgical formulae, the four castes of man, the moon, the sun, the fire, the wind, the air, the sky, the earth, the points of the compass; nothing, nobody is omitted. This universal sacrifice signifies divine transcendence.

Prajapati as father

The sacrifice is the gift of the One who sacrifices Himself, who dismembers His body in order to let the world be. There is no other to whom to offer the sacrifice, no other to accept it. That One is at the same

time the sacrificer, the sacrifice, the person to whom the sacrifice is offered. In the nonpersonal tradition, that One is Nonbeing; in the personal tradition He is Prajapati, Father of all Beings. The Upanishadic sages have sought to penetrate the mystery of creation in Him. Man's self is identified with the sixteenfold of Prajapati (BU 1.5.14-15). Prajapati created the active functions (BU 1.45.21), so man's activities are the spirit of Prajapati. The heart is the same as Prajapati (BU 5.3). The indistinct form belongs to Prajapati (CU 2.22); so, for making a form man has to approach Him. Prajapati brooded upon the worlds. From them, issued forth the threefold knowledge (CU 2.23). He extracted their essence : fire from the earth, wind from the atmosphere, the sun from the sky (CU 4.1). Prajapati was desirous of creatures. He performed austerity. Having performed austerity, He produced a pair, matter and life. Matter is both what is formed and what is formless. Therefore material form indeed is matter (Pr U 1.4-5). In the *Surtras*, Prajapati is often identified with Brahma. The Brahmanas identify Him with Visvakarma, the artificer of God.

Creator as God

In the Indian tradition, the universe at large is an artefact echoing, living and expanding. Only a part of it is visible in many forms, many colours, many notes, many tones. Three-fourth of it is invisible. The visible and the invisible are strung together by the 'cosmic thread'. The universe is the theatre where God is the chief actor, the supreme artist. God's epithet as artist found the greatest emotional stimulus among the saint poets of medieval India. Many of the names of God refer to the work of art : He is the divine architect. He is the weaver. He is the painter. He is the potter. As Kabir describes Him :

The Clay is one,
But the Great Designer has designed it
In varied shapes, in many forms.
It does not become us to find fault
With the Vessels of Clay,
Nor with the Potter who shaped them[2].

Potter as Prajapati

The human potter is compared with the divine potter, Prajapati, Father of creatures. Like Prajapati, the potter shapes the clay in many forms and extracts the essence of five elements. He embodies in himself the spirit of Prajapati, produces matter and life, and gives form to formless. He frequently refers to Visvakarma, by whose name he honorifically calls himself.

The association of Prajapati, Brahma, or Visvakarma with creative work like pottery needs no elaboration. What makes the traditional world view significant is the way of integrating human creativity to some higher principle and in some measure of sanctification. In Islam one of the many names of Allah is Musawwer, the Artist. The Muslim potters, like their Hindu brethren, attribute their creative work to Lukaman, the originator of all the arts, the counterpart of Visvakarma.

Creativity as grace

Contrary to the modern system of knowledge which claims to be autotelic and autonomous, the potters consider their creativity and knowledge as God's gift. One of the most widely prevalent sacred myths about the origin of pottery-making runs as follows :

> Long long ago, in *Satyayuga*, the Golden Age when man and Gods freely interacted, Shiva, the Lord of Kailash wanted to marry Parvati the daughter of the Himalaya. For their wedding a *kumbha* (an earthen pot) was required. But all the gods and men, who were assembled on the occasion, expressed their inability to make an earthen pot. At last, a Brahman, Kulalak by name, offered his service; but then he demanded the tools of pottery-making. God readily agreed to his demand. The God Visnu gave his *sudarsanchakra* (discus) to be used as a wheel, beneath which the mount Mandar agreed to be fixed as a pivot. Shiva gave his *ghotana* (a pestle for grinding *bhanga*) for turning the wheel, his *langauti* (loin cloth) for mopping, his *kamandalu* (a water-jar made of wood) for storing water, and also his *jenau* (sacred thread) for detaching the pot from the wheel. God Brahma gave the *adi-kurma* (the primeval tortoise) for making use of it as a scraper. With these tools, the Brahman Kulalak prepared earthen pots for Shiva's wedding. The descendents of Kulalak are ever since called Kumbhakar, makers of earthen pots[3].

The image makers have a similar story to tell. The technique of image-making is God's gift :

> Once Dharmaraj, the Sun God, appeared to a blind Maru potter in his dream and asked him to prepare His

image. When the potter expressed his physical inability to do so, the God asked him to be ready for work on the following day. As directed, the potter took a holy bath and waited for the God. When the Sun rose in the sky, Dharmaraj came mounted on horseback. While the God stood by the side of the blind potter, His shadow fell on the ground. The God said, 'Look at my shadow!' Thereupon the blind man regained his lost eyesight and finding the shadow of his benign Lord made the image forthwith. Pleased by his creative ability, Dharmraj gave him a boon that he and his descendents would never die of hunger so long as they prepare the image of Dharmaraj but others who dare to emulate them in this art would turn blind and perish[4].

The sacred myths of cosmogeny reflect a divine principle operating on the human plane. Man and God are inseparable in creativity at the existential level of material objects. The myths that God gave Kulalak the tools and to the blind potter eyesight, express the deep conviction of Indian cultures that : (a) without the grace of God human creativity is not possible, and (b) without the human agent God cannot communicate between the spheres of the real, as in the Shiva's wedding and the Dharmaraj's worship on the earth. The thrust of this interpretation, based on the anthropological theory of myth, comes down to challenge the Christian claim that man creates in *imitation* of God's act of cosmogeny.

The Sacred Principles of Pottery-making

Divinely ordered

Pottery, as an art, has a divine origin. The Great God killed a demon, from whose breast bone He prepared the central part of the potter's wheel. The ribs became the spokes of the wheel, and the demon's eye formed the socket on which the wheel rotates. All the three Gods - Brahma, Visnu, and Shiva - gave Kulalak, the primordial potter, the tools, and ordered him to make earthen pots. The Sun God restored the lost eyesight of a blind Maru potter and asked him to make terracotta horses. Since the art is divinely ordered, it has to be necessarily conventional. Even a single stroke on the pot has significance. As the myth has it.

Rama, during his exile, was passing a well. He asked the *ged* (small clay pot for drawing water) if it had seen Sita. The *ged* replied that it had seen Sita and had wanted to rescue her from Ravana but could not do so. When Rama asked, 'why not', the *ged* replied, 'how can I when I have neither hands nor feet?' Rama realised the truth and blessed the *ged* that thenceforth everyone would come to it for water. Saying this, he made a single length-wise stroke on the pot from top to bottom. Potters make this mark till today and call it *remanikhahar*, Rama's stroke. Even the price of the pottery goods has to be fixed in divine consultation. A potter from north Gujarat once invoked his deity Tubraj, a mountain God saying : 'I am now in trance, so fix the amount that I should charge for my goods from today'. Tubraj instructed him to accept some quantity of clarified butter for terracotta horses and elephants. The village people believe that such horses and elephants carry the blessings of the deity. Even today, the descendants of this potter seek divine guidance in making important decisions[5].

Life-Affirming

Technology must have reverence for life. Before igniting a kiln, the potter reads a prayer :

Beware, O insects ! the fire is coming.
The kiln is set afire.
Beware insects, ants and all living beings !
May the evil caused by killing these insects
Fall upon him who has returned evil for good
And takes away things without appreciation.
May the Lord strike such a one with leprosy[6].

There is another prayer which says that the secret of firing and the sayings of saints are transmitted from teacher to pupil. An old man sets fire to the pile, and if at all there burns any life in the kiln it will go to the nectar world. Dream and prayer of *Prahalad* and *Siriyadeva*, personification of hearth, came true. This is what Guru Gorakhnath spoke to the assembly of many saints[7].

Aesthetically Oriented

Potters attach utmost importance to aesthetic value to their work of art. In western India, even the bottom of a pot is painted. There is a saying, 'design embellishes a pot just as a woman's look is improved by the ornaments she wears in her hair'. In south Gujarat the women decorate terracotta horses with a view to creating figures worthy of God.

By using the skill of their thumbs and fingers they have evolved an enormous wealth of styles[8].

Simple, less than human

Technology must be simple and necessarily within human control. As the story goes, at one time the wheel used to rotate on its own. A potter once went away on pilgrimage, leaving his wheel spinning. When he returned, he saw that it was still spinning. And that irritated him. So he kicked it in anger, and it stopped. Since then the wheel rotates only at the command of the potter[9].

Minimal needs

To maintain the natural order of life and harmony in society, the potter follows his myth without question. Here is a sacred myth.

The God Bhagban was going to be married and so he asked the potter to make pots for the wedding. The potter then set about fashioning the vessels. When they were complete and fired, he found that the pots had turned into pure gold. He simply could not bear to part with the gold pots, so he started to get a second set ready. These in turn changed to shinning silver, he put them aside as well. The next lot turned into gleaning copper, which he did not feel like giving either. Finally, the pots remained clay and the potter took them to Bhagaban for use at his wedding. Bhagban was surprised; he asked him how many times the vessels were fired. He told the potter if he had brought either the gold or the silver vessels, he would always have had gold and silver in his house. But, as he had been greedy and brought only the clay pots, clay would be his destiny[10].

The moral of the myth is to minimise human needs and bring contentment to fill mankind with the heavenly happiness and the joy of creativity, but not greed and indulgence.

Non-competitive

To minimise economic disparity in society and to allow people to develop their genius uninterrupted, occupation must be non-competitive at the level of production as also at the level of knowledge. Pottery-making is the hereditary monopolistic occupation of the potter caste. Even among potters much of one's knowledge in pottery-making is

gained by experience. Potters have received a boon that they would never die of hunger, but others who would try to emulate them in this art would turn blind. There is another myth which makes hereditary occupation a divine ordinance.

Shankar created two figures : one man and another woman. This couple gave birth to children, and thus eighteen castes came into existence. 'What knowledge can I give them so that they may earn their livelihood?', wondered Shankar. To decide this he made all the eighteen castes sit in a row. To one caste he gave a plough, to another he gave business acumen, to yet another he gave land, and so on. To the potter he gave the knowledge of how to work with clay[11].

Purusartha

By divine ordinance all occupations enable a man to pursue *purusartha*, the Four Purposes of life; *dharma* meritorious duty, *artha*, right livelihood, *kama*, creative power, and *moksa*, absolute freedom. As Prajapati, a potter performs the act of creation, he is aware of his role, as he makes terracotta horses. He says, 'from eight parts I create one soul'; 'inanimate parts are put together to form one animate whole - the horse'. There are ways of infusing life into the terracotta horse. It is marked with blood or a dot of vermilion powder which is symbolic of life. This horse is considered as God on earth. As Kumbhakar, makers of pot, the potter lives by the art of shaping clay by a divine ordinance. As a priest, the potter uses his creative power at wedding rituals. He makes the bride sit on the wheel which is turned seven times anti-clockwise. His wife presents the bride seven coloured pots. This ceremony is performed for a happy married life and also for fertility. At some places, the potter performs the funerals for various communities to ensure *moksha* to the deceased. And by adhering to the divine ordinance, his own salvation is also secured[12].

Traditional and modern principles of technology are worlds apart. To make the differences plainly visible, the two sets of the ideology of technology are presented side by side[13].

Traditional technology	*Modern technology*
1. Divinely ordered : knowledge rooted in transcendence, God's grace.	1. Humanly ordered : knowledge autotelic, autonomous.

2. Life-affirming : reverence for all life.	2. Life-negating : seeking temporal power.
3. Aesthetic value oriented.	3. Materialistic value oriented.
4. Simple, less than human : higher values controlling technology.	4. Complex, more than human : technology controlling higher values.
5. Minimising human needs : bringing contentment.	5. Maximising human needs : creating discontentment.
6. Non-competitive.	6. Highly competitive.
7. Leading towards the fulfilment of human life.	7. Leading towards the animal world of survival : deep entrenchment in temporal existence.

In Potters the Civilization Discovers its Source

Continuity in technology

Prehistoric and protohistoric India has been marked off into three broad cycles of culture termed as Pre-Harappan, Harappan, and Post-Harappan. The data available on contemporary and ancient pottery tools and techniques indicate an amazing similarity between the two. Although no potter's wheel has yet been excavated, the entire sequence of the development of wheel can be constructed. The potters of Punjab and Jammu make use of the foot-wheel called *Pathan-chak* the wheel of the Pathans. Elsewhere in India, the most common is the hand-wheel called *Rama-chak*, the wheel of Rama, an incarnation of Visnu. There are five types of wheel : socketed block-wheel, socketed spoked-wheel, pivoted block-wheel, pivoted spoked-wheel, and double-wheel or foot-wheel. Along with the wheel exists the technique of hand-modelling. In some places pots are made *only* by hand-modelling. At some places, the hand-modellers employ a revolving base or turnnette which must not be mistaken for a wheel or even as a substitute. The various techniques of hand-modelling may be classified into three types : pressing, moulding, and strip method. Methods of firing are also of three types : firing in open, firing in an oven, and firing in a kiln. Painted pottery is of two kinds : the one which is painted before firing and the other which is first fired and then painted. It may be said that north-western and northern zones of India - which are slightly marked off from each other in respect

of the type of wheel, the method of firing, and other minor elements of regional variations - have several points in common. Both of them conspicuously differ from the mixed pottery zone of central India where various elements of pottery technology from the north and the south have repeatedly penetrated. The south has its own tradition of pottery - perhaps as ancient and important as that of the north - so well known for antique pottery. But central India emerges eminently as a meeting place of these two great traditions of pottery-making[14].

Continuity in ethnicity

Continuity in pottery technology strongly supports the view that the so-called 'Aryan invasion' could not destroy, at least, the Harappan tradition of pottery-making. The Harappan population of Mohenjo-daro has similarities with the present-day long-headed population of Sind, so far as the cephalic index is concerned. The same relationship holds between the ancient population of Harappa and the present-day population of Punjab. The skulls from Lothal are on the average round-headed. This is remarkably close to the cephalic index of the present-day inhabitants of Gujarat[15]. This may be further supported by the study of the present-day population of potter caste. Three important observations have been made : (a) that the peasant potters of this region have preserved the ancient technological traditions; (b) that the groups of potters using ancient tools and techniques belong to a common socio-ethnic stock; and (c) that such related groups, with a few exceptions of interpenetration, are well within the boundaries of ancient civilization.

Caste as culture

In each linguistic region, the potters are segmented into several endogamous sub-castes which at places are arranged in a hierarchy of commensal groups, often having their own mechanism of settling disputes. These are not ordinarily distinguished by the other castes as separate groups, but are regarded as a single entity within the potter caste. It would be wrong to assume that all the potter sub-castes have sprung from one single body, although elsewhere as well as in the case of the potters there are instances of the division of the caste into sub-caste on the basis of class, change in occupation, or religious denomination. There are seven categories of the potter sub-castes : territorial, technological, myths of origin, association with animals, sectarian, occupational, and non-descript groups. This kind of heterogeneity cannot be attributed to the caste system. Indeed, what is called a sub-caste in

anthropological literature is not a divison of caste in the sense that a larger group was divided into sub-groups. It is a sub-system within the broad framework of caste and hence sub-caste. Although the sub-castes tend to show a superficial heterogeneity in their external social structures, they are indeed much more homogenous in respect of their internal organization. The diacritical marks of food, dress and ornaments are in conformity with the basic ideology of *kula dharma* (family tradition) and *jatidharma* (caste tradition). The differences become unimportant because they identify themselves collectively as Prajapati, maintain their cultural boundary, and owe their allegiance to the authentic tradition of India[16].

GENERAL CONCLUSION

Civilization is the rhythms of life of a people. It rotates like the potter's wheel, shapes like an earthen pitcher, makes it aesthetically perfect like a painted pot, undergoes through the fire of human experience, and by God's grace comes out safe like kittens of the potter's kiln.

This study does not move on a merely technological level, it does not propound an anthropological theory of caste and culture, it does not look for a universal form of human celebration. It is not inclined to accept the idea that civilizations are saved by reason alone or liberated by technological power alone. It runs counter to the theory which claims that man lives in his singular glory and has a limitless liberty. In reality, modern man is merely a tool-making animal. Technology has acquired efficient power and has developed its own laws. Since man is enslaved by technology, his creative genius remains unsatisfied. He becomes a consumer and ultimately a self-destroyer, as the *bhasmasur* syndrome[17] of modern technology becomes operative.

ABBREVIATIONS

BU	Brhadaranyaka Upanishad
CU	Chandogya Upanishad
Pr U	Prasna Upanishad
RV	Rig Veda

NOTES

1. It is somewhat artificial to stitch the previous writings together with a single logical thread. The only real thread in this presentation is the loving memory of a great teacher, Professor Nirmal Kumar Bose, who initiated me into the study of potters. The fieldwork on potters of India was conducted during 1961-65 under the auspices of the Anthropological Survey of India. I am deeply grateful to Dr. R. K. Bhattacharya, Director of the Anthropological Survey of India, for asking me to revise my old thoughts.

2. Saraswati (1995).

3. Saraswati (1979).

4. *Ibid*

5. Shah (1985).

6. Saraswati (1989).

7. *Ibid*

8. *Ibid*

9. *Ibid*

10. *Ibid*

11. *Ibid*

12. *Ibid*

13. *Ibid*

14. Saraswati (1979).

15. Gupta (1962).

16. Saraswati (1979).

17. In the Pauranic tradition there is a myth about Bhasmasur which runs as follows : Once a demon went on performing penance for a thousand years to get a boon from Shiva. Pleased by his performance, Shiva appeared before him and said : "Ask a boon". The demon prayed, "If you are so pleased my Lord, grant that I may be endowed with power to reduce anyone to ashes simply by putting my hand on his head." Shiva spoke "May it be so!" Now the demon wanted to test the boon forthwith on Shiva himself. And as he was about to swoop down on his benefactor, God took to his heels in utter desperation. The demon Bhasmasur started chasing him. Eventually, filled with fright, Shiva approached Visnu for protection. Thereupon Visnu in the form of Mohini (the charming woman) sat under a tree where Bhasmasur came up in search of his prey. Infatuated by Mohini's beauty he stopped there and asked her to make love with him. Mohini replied, "I am a dancer, you can get me only if you could match me in dance." Bhasmasur agreed, and he began dancing in great excitement. Following Mohini in the dancing gestures, he lifted his hand higher and higher until it touched his head and reduced him to ashes instantly (Saraswati 1989).

    Is it not strange that instead of asking beneficence such as deathless existence for himself, the demon prayed for a boon on destroying others? Perhaps not. Because by asking such a boon, the demon has usurped Shiva's greatest power. And so when the boon was given the Great God of Death became utterly helpless and miserable. This theme of the myth of Bhasmasur is a pointer to the human condition of our time when Man has granted boon to demonic technology.

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Pottery and power in south India

Stephen Inglis

Recently, my local newspaper reported that scientists at the National Aeronautics and Space Administration's Ames Research Center in California had announced a major discovery. In contrast to prevailing views about the origins of life in the sea, they had found evidence that life on this planet originated in clay. Their presentation showed that common ceramic clay contains two basic properties essential to life: the capacities to store and to transfer energy.

This paper will introduce a people who, without reference to western scientific evidence, base their lives and work on a similar premise, as have their ancestors for thousand of years. Unlike scientists who are concerned with the origins of things, these are craftsmen concerned with the continual unfolding of things, giving expression to basic ideas about fertility and the creative process and providing the material which embody these ideas.

Fertility is a major concern of all agricultural societies. The strength, abundance, and replication of crops, livestock, and the social group are both the subjects of daily conversation and the focus of ritual. In the southern Indian state of Tamil Nadu, where I lived for two years with Hindu village potters, the potter not only provides materials through which fertility is addressed, but also acts as priest for the deities who control fertility. Of the many communities of potters in south India, I refer to those who use the title Velar and live in the districts of Madurai and Ramanathapuram.

Sacred power, according to ancient Tamil beliefs, is immanent and saturates objects, people, and particular places. Local deities are accretions of this power, involving themselves in every aspect of daily life.

rather than remaining aloof or transcendent. Their power is immediate and capable of creating havoc.

The sacred forces are continually involved in renewal of the earth, the crops, the season, and of life itself. In this sense, they are at the same time intimately associated with deterioration and death as well as birth and growth. Both are encompassed by the sacred. Nothing new can be created without the destruction or transformation of something else, so to attain new life, an old life must be extinguished. The universe is conceived of as a closed circuit. Creation is not a unique event at the beginning of time, but an ever-recurring event.

The sacred forces must be honoured, worshipped, and sacrificed in order that health, fertility, and the continuing renewing processes of life will not be interrupted, yet to achieve this, they must be controlled. This control, or order (*aanaku* as it is called in the ancient Tamil Sangam literary works), is achieved by the periodic creation of an enclosing structure which places a boundary around the sacred power. This boundary may be conceived as a temple wall, a container, an image, or even a human body, but the boundary must always be erected or fortified by ritual preparations performed by specialists. Potters are among the most important of these specialists.

Pots

There are over 250,000 potters in Tamil Nadu, many of whom live and work in traditional territories where they claim indigenous status and have hereditary rights to gather raw materials. Within these territories they also have the responsibility to serve a range of clients with various clay products. The products include both domestic wares, such as dishes, storage pots, and clay stoves; and ritual objects, such as special festival containers, images of deities, and offerings to those deities.

In some south Indian villages, one can recognize an area where potters live by the stacks of pots, clay stoves, and other utensils awaiting sale or distribution. Great numbers are produced to serve the constant recycling of ceramic products. On one hand *terracotta* is low fired, porous, and has a limited life span in everyday use. More importantly, clay products are also ritually "unstable." What is pure when new quickly becomes tainted when used, so household ceramic vessels are ritually broken and replaced each harvest season, as well as on occasions of birth, death, marriage and other important events.

Some pots, with simple addition of a rudimentary face, a painted decoration, or a garland of flowers, become suitable as containers for sacred power. They may become carriers for burning coals, which contain the heating qualities of local goddesses; for sprouting seeds, representing fertility of the crops; or to hold holy water on the marriage platform, encouraging the fertility of the bride and the lineage. Whatever their nature or span of use, clay pots are regularly ritually destroyed, clearing the way for a new pot, a new festival, and a new life.

Images

Pots are only one kind of container used to address issues of fertility and creativity. It is useful to think of religious images made of clay as containers, for they too act as receptacles for particular kinds of sacred power under controlled circumstances. Local temples in rural Tamil Nadu typically feature the worship of a series of deities concerned with everyday issues surrounding weather, food, illness, and birth. During periodic festivals these deities inhabit special temporary images made, in their likenesses, by potters who hereditarily serve their temples.

In addition to images of the deities *Aiyanar* (the Lord), *Karuppu* (the black one), *Mutaiya* (the pearl one), *Sonaiya* (the cemetery one), etc., potters also make clay offerings which can be presented to the deities during worship. These may be as humble as brick-sized plaques of scorpions and centipedes, offered by field workers to enlist divine help in avoiding injuries from these pests. They may also be shaped like praying or crawling infants, for presentation to a deity by women seeking pregnancy or the recovery of a sick child. The largest and the most spectacular of these offerings, however, are images of horses, and occasionally bulls or elephants, made to symbolize mounts for the deities to ride on their nocturnal tours of the village boundaries.

Although a ubiquitous part of local temple offering ceremonies throughout India and a consistent symbol of kingly power in Indian art and mythology, the depiction of the horse is no where as prominent as in the local temples of Tamil Nadu. Clay horse images, ranging in size from toylike miniatures to truly monumental sculptures of ten and fifteen feet in height, dot the landscape. The unexpecting viewer can become overwhelmed by the sheer numbers of these images. In some isolated temples with particularly active festival traditions, one can see

hundreds of clay horses, the accumulations of years of offering, stretching away under the trees into the distance.

Horse offerings are commissioned by individuals, festival patrons, or caste groups, and like other clay images are dedicated to a particular worship event. The potters handbuild and fire the horse images of deities to which they will be offered, and assemble and paint them in preparation for their transport in procession to the temples where they will be worshipped and left. In some cases, one or two horse images may be involved, yet in others there may be dozens, garlanded and carried on bamboo poles from the potter's yards to the temples. The largest sizes of horse offerings are built and fired *in situ* at the temples, since any form of transportation is impractical.

Many of local temples consist only of a few stone images and stone platforms by a pond or stand of trees. The accumulation of clay images, particularly horse offerings, gradually becomes the "walls" of the temple as new images are added year by year to the outside of the herd.

Yet as with pots, clay images are dedicated to their own destruction. They are a means by which powerful local deities are contained for short periods of time, honoured under carefully prepared circumstances and then released back into the chaotic world of daily life. The deities will be encountered again only in a subsequent image, at the next festival. The fragility of clay images is integral to the role they play in Hindu worship. They quickly fall apart and eventually become part of the handful of earth that the potter takes from the temple floor to mix it with the clay that builds the next set of images and offerings.

Potters

In addition to making clay vessels and images, many potters in south India have the responsibility of providing priestly services to their village neighbours. This involves a wide range of duties from administering worship in local temples to offering themselves for possession by local deities and acting as oracles. In this role of a priest we encounter yet another version of the container of sacred power. The possessed priest offers his body, like a pot or image, as temporary receptacle of the divine.

Much of the potter's craft is concerned with containers: pot, image

and possessed priest. All are temporary, subject to renewal or replacement, and all contain a volatile creative power so that it can be approached, honoured, and then released to do its work.

The abilities of potters to work with the recurring process of creativity enable them to approach these deities. Their bodies, like their raw materials and the gods they serve, are part of the life of the territory. Potters own no land and can be driven away by their wealthy patrons, but it is a foolish landowner who exposes his dependents and property to a situation in which local deities have no traditional forms in which to receive honour. Although potters are rarely involved in the major economic means of production, in much of Indian society they are central to the "means of reproduction".

Constant regeneration of fertility and life is an issue central to the domestic and ritual life of south Indians. The potters, through their craft, provide material and arrange situations in which this issue may be addressed, not only passively portrayed, but actively generating a cultural response. Pots, images and priests help bring a particular set of beliefs and ideas into the realm of objects where they can be dealt with. These clay products thus help people to make sense of their world.

Alternation between life and death is an insoluble problem with which Indian society and probably all human society is concerned. Unlike great stone monuments dedicated to permanence, the products of the potters' craft recognize impermanence but also aid continuity and regeneration. The clay cycle accounts for the destructive and fluctuating as well as the constructive and fixed. This is the essence of the use of ceramics in traditional India, and central to the nature of craftsmanship in India.

Like the scientists in California mentioned above, people in rural south India see clay as suitable for the storage of energy and, more importantly, through the constant ceramic cycle, the transfer of energy. For both scientists and peasant farmers, this is a key to the creative process.

Folk musical instruments of Bengal

Prabhas Sen

India is very rich in its folk musical traditions. Along with the varied and complex folk traditions of mainstream cultures, we have numerous tribal cultures spread all over the sub-continent with their typical musical traditions of great beauty and antiquity.

In mainstream folk cultures musical instruments are mostly used as accompaniment to vocal music, but among tribal folks, the drums, perhaps the most primitive of the musical instruments, are independent vehicles of musical expressions and the rhythmic beats of tribal drums often evoke the primordial rhythms of long forgotten beginnings of human existence.

The basic musical instruments - instruments made of solid objects like wood, metal or stone, instruments covered with hide or skin called drums, instruments of strings, thongs or guts and wind instruments have been known to people all over the world since prehistoric times in some ancient form or other.

Tribal people, all over the world used only 4 or 5 notes of the musical scale that invested their melodies with a special quality.

Most of the tribal groups in India still use the 5 basic notes for their music and their musical instruments also are sometimes made for use of these 5 notes only.

In this article I shall try to cover the folk musical instruments in Bengal in general and West Bengal in particular. It would include the folk musical instruments of mainstream culture groups, as well as distinctive groups of the *adivasi* folk that live in the area since times immemorial.

There are also groups like the detribalised Rajbansis of north Bengal and the Bhumijas of Bankura and Purulia area who may perhaps be called semi-tribal folks today, because of their closeness to mainstream culture.

The most primitive musical instrument still in use in some corners of Bengal is the *Buang* of the *adivasi* Santal folk. The instrument is almost a meter long consisting of a bamboo tube, a resonator and a rope. The resonator is really an egg-shaped bamboo basket covered tastefully with strips of coloured paper pasted on the basket and tied firmly below the bamboo tube at a central position. At the two openings of the tube two curved wooden pieces, each a few cm. long, are inserted and a hemp rope is tied taut across like a bow-string. The player holds the bow in one hand and pulls and releases the rope by the other, producing a deep drone in rhythmic accompaniment of vigorous dance movements during social group dances on festive occasions. The instrument is made by *adivasi* craftsmen at the large concentrations of the Santal folk in the districts of Bankura, Purulia, Midnapore and adjoining districts of Bihar state.

Musical instruments used in large areas of the sub-continent are sometimes known by different names among different culture groups - *adivasi* or others. For instance *madal* or *maddal* known and used by different *adivasi* folk of central and eastern India is often called *tunda* by the Santals, Koras, Mahalis and Mundas at least in areas of Bengal. *Banshi* or the horizontal flute and the small conical drum are simultaneously known as *Tiriye* and *Tamac* (with a hard T) among them, the large pair of cymbals generally known as *Kartal* are called *Dasai* by some Santali speaking *adivasi* groups. The *Dasai* is used as an accompaniment to certain types of dances on social or ritual occasions.

The *Madal* or *Tunda* is a gracefully tapering cylindrical drum generally about 75 cm. long with one face narrower than the other. Both the faces have large circles of *gaab* paste coats on them that give the typical deep tone of the *Madal* drum played by fingers. The *gaab* paste called *syahi* in Hindusthani is known as *Kharen* in Santali. The *gaab* never covers the whole leather-face of any instrument.

The *gaab* or *syahi* is a finely ground mixture of well heated and cooled iron powder—loha-bhasma, glue, paste of wheat flour and charcoal powder for black colour. Proportions of the different ingredients are

well-guarded secrets of the instrument makers. The *gaab* is always applied layer by layer of circular shapes of gradually diminishing diameter giving it a slightly convex surface when finished.

The thick *gaab* or *kharen* coat on the narrower right face of the *Madal* drum is black and smaller than the white *gaab* coat (minus the charcoal powder and perhaps the iron dust also) of the broader left face. The white *gaab* coat covers almost the whole face leaving aside only an inch wide exposed ring of a second leather cover pasted on the playing parchment to strengthen it for stretching over the drum mouth.

The body of the *Madal* is of burnt clay, fully covered by narrow strips of leather thong wound round its surface neatly. The two open mouths of the clay cylinder are covered with animal hide-parchment strengthened as described above by fixing another layer of leather covering the edges as a ring and leaving the wide parchment surface exposed to be loaded with *gaab* for playing.

The strengthened parchment faces of the *Madal* are fixed to the cylinder by stitching them to rings of strong hemp rope fixed around the two faces. These are then tightened by numerous leather thongs passing from one face to the other along the body but without touching it creating a beautiful pattern of thongs round the drum.

Unlike many other drums, the *madal* drum faces are fixed, they can not be loosened or tightened for tuning, like the *Tabla*. The *gaab* or *syahi* coated drums are played with the hands, drums played with sticks are generally uncoated.

One of the most ancient musical drums and most widely distributed, is the conical or kettle drum. Narrow at bottom and wide at the top, its upper side has the stretched hide or skin which is played with hands or sticks. The skin is usually laced to the body which may be earthen, wooden or metallic. Its size may vary from the enormous *Nagara* of north India to the diminutive *Tamukku* of Tamil Nadu. Most of the conical drums are tribal and folk instruments.

The small conical drum used by the Santal people is called *Tamak* (with a hard T). Its parchment face is not coated and is played with thin bamboo sticks. The huge *Nagara* used by the Mundari folk of Purulia district as an indispensable accompaniment to the famous *'Chho'* dance

is known as *Dhamsa*. It is usually covered with stretched buffalo hide. A number of which when beaten together with thick wooden sticks on a festive evening, produces deep rhythmic sound that reverberates in the hills and forests around.

Generally, neither the *Madal*, nor the conical drum *Tamak* are made by the tribal people themselves. They are made by traditional folk craftsmen of mainstream life, along with so many other articles of use for every day life of the tribal folks. For generations nontribal crafts people living close to large tribal habitats have been making typical items of special designs for them only, like textile with special texture, colour and design motifs, bell-metal utensils of special shapes or the beautiful metal ornaments of distinctive "Santali" designs. The Dhokra Kamars or Malhors who traditionally earn their living by producing a range of decorative objects of metal by a prehistoric lost-wax casting process, are also a people of tribal extraction. They use the same musical instruments as the Santals along with a small *'Dholak'* a very common folk drum extensively used all over India with small local variations.

The Santal's bowed *Lute-Banam* is generally made by themselves. The wooden instrument of beatutiful sculptural form is often made with boldly sculpted decorative animal, bird or human head mounted on the peg box. The small bamboo bow is covered with very delicate lacework of geometrical patterns like a snake skin made with fine strips of skein from different coloured forest creepers. The resonator of the lute is partially covered with the skin of a local water-snake.

All *adivasi* people are fond of flutes. They make a variety of them from bamboo of different kinds and along with its social use, a flute used to be the constant company of the tribal youth even a few decades ago.

The most popular flute of the Santals is the *Tiriye*. It is held horizontally and the air is blown into the bamboo tube through a hole near its mouth, like the mainstream folk-instrument *aar-bānshi* (or the *banshi* of Shri Krishna of Hindu mythology) but unlike the slim *aar-bānshi* of about 45 cm. length, the *Tiriye* has a thicker and longer tube and a deeper sound. For tonal control it has 4 to 6 holes in a row towards the lower half of the flute.

Another typical flute of the Santals - the metre long *Murli* that is

held vertically is even thicker than the *Tiriye* and is blown directly through its mouth-hole and used on special festive and ritual occasions. A diminutive *Murli*, only about 10 to 12 cm. long, is used during happy social festivities with women dancing and singing, men showing off their skills on *Tunda*, *Banam* and *Tiriye*. The clay pots of home–made brew almost empty; somebody now gets up to take the merriment to a new peak and joins in with occassional blasts of the shrill, high pitched notes of the tiny flute — the *Piding-Murli*. Other wind instruments used by the Santals are the trumpets — *Sakua* made of buffalo horn and *Ramsinga* made of sheet metal, the first is used for the *Baha parab* (spring festival), and the other generally during marriage processions.

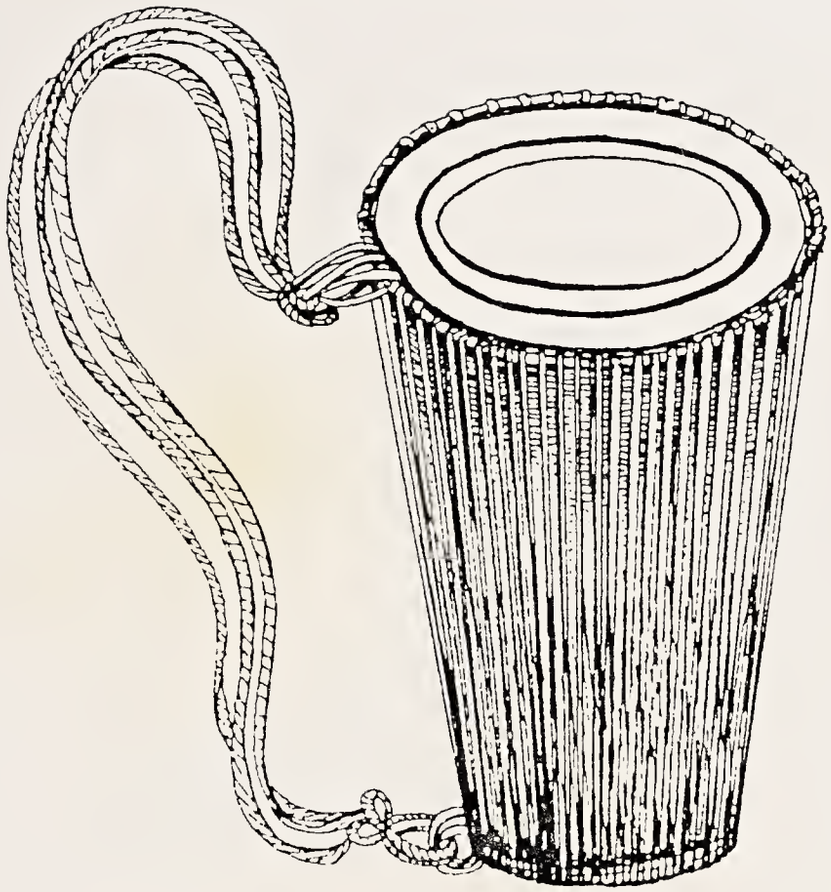
The snake–charmers who roam the country, came originally from the tribal belts of central India. The snake–charmer's *Pungi* is a different kind of wind instrument. It is an instrument belonging to the same class as the bagpipe of the West. In Bengal the *Pungi* is often known as *Sāpuria Bānshi*. It consists of a small calabash which serves as an air reservoir to which is attached three bamboo or reed pipes, One pipe is inserted into the top of the bottle-gourd. This is the flue into which the air is blown. The air collects into the gourd and passes out through two pipes fixed at its lower end. Each of these pipes has a single beating reed and gives out the sound; but one of them acts as a drone and on the other the melody is played.

Among mainstream folk cultures of Bengal, the Bauls have a very rich musical tradition with typical musical instruments of their own.

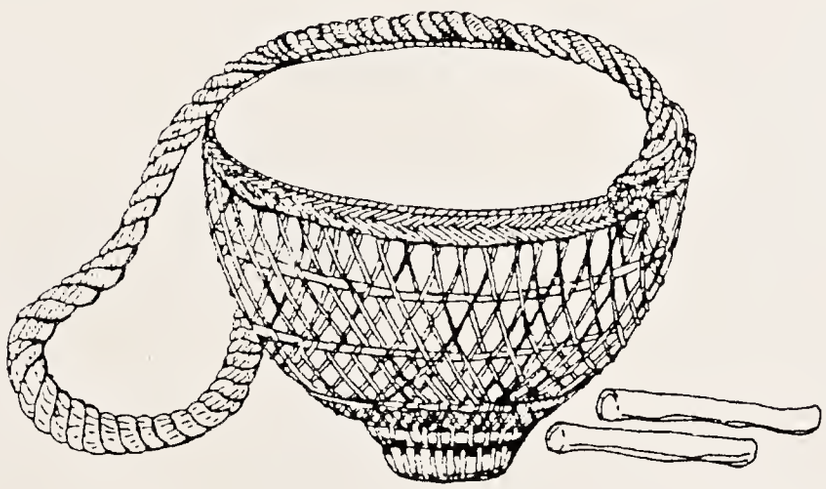
The Bauls are a mystic sect, whose religious observance is expressed largely in music and dance. They live scattered throughout East (Bangla Desh) and West Bengal in settlements like small communes called *ākhada*. Mostly drawn from village homes of lower and very occasionally upper caste Hindus, the Bauls, both men and women leave their homes and society to join the community life of the *akhada*. Caste distinctions are shed, they are now all equals — Bauls of the *'path'* – the road.

A similar mystic Muslim sect calling themselves Aauls - are hardly different from the Bauls in respect of their philosophy of life.

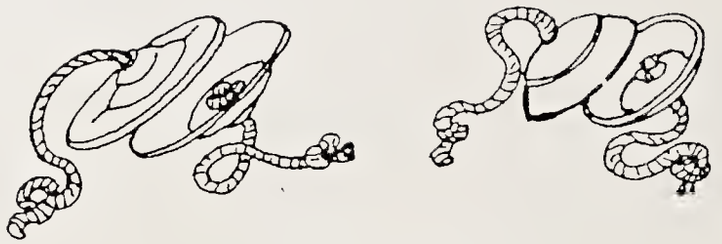
The Baul and Aaul *ākhada* are generally simple self-sufficient establishments, all the members sharing the labour and its fruits equally. Their simple and austere life style leave them enough time to practise



Madal

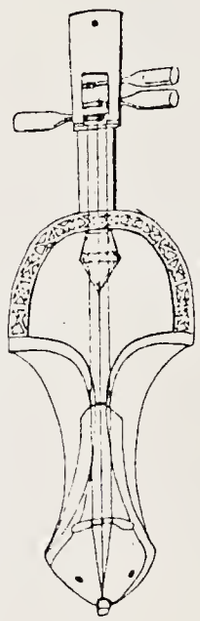


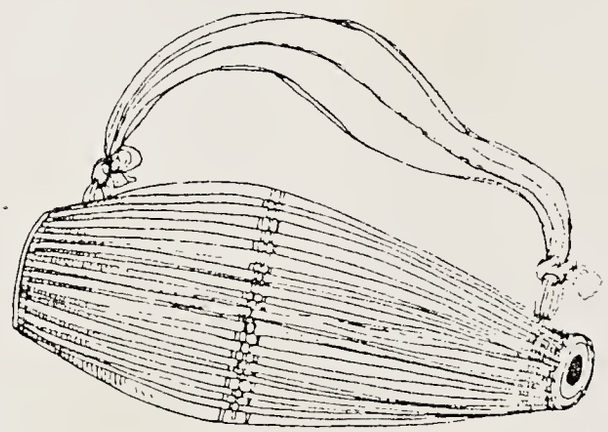
Tamak or Nagara



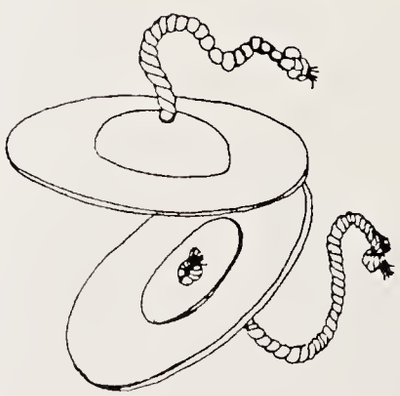
Mandira / Khanjani

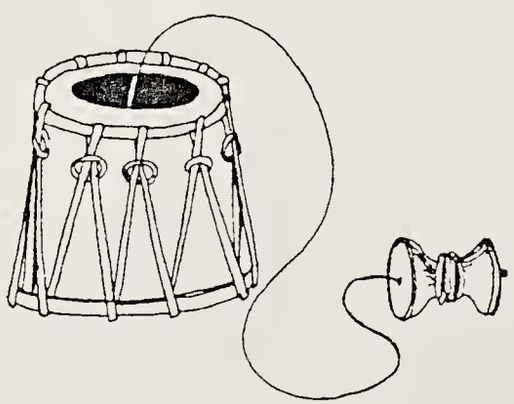
Sarinda



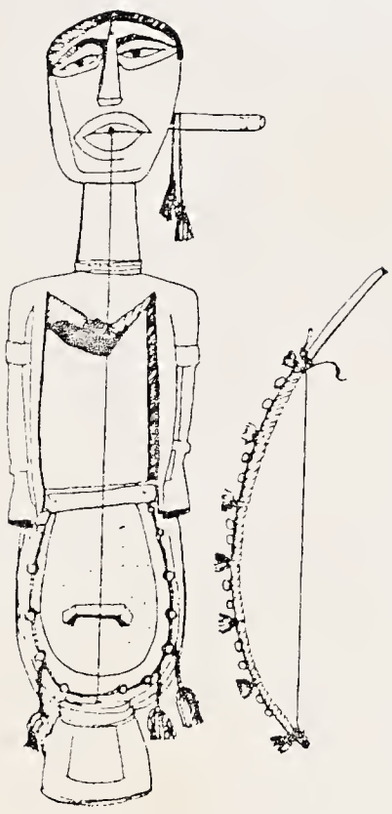


Khol

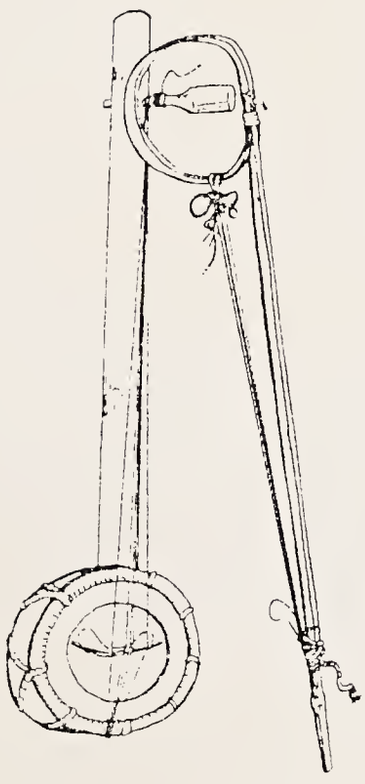




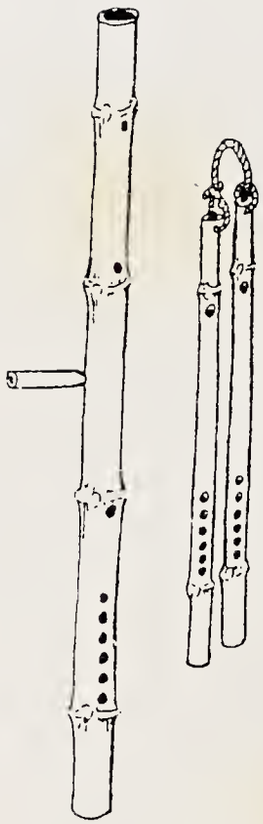
Khamak or Ananda Lahari



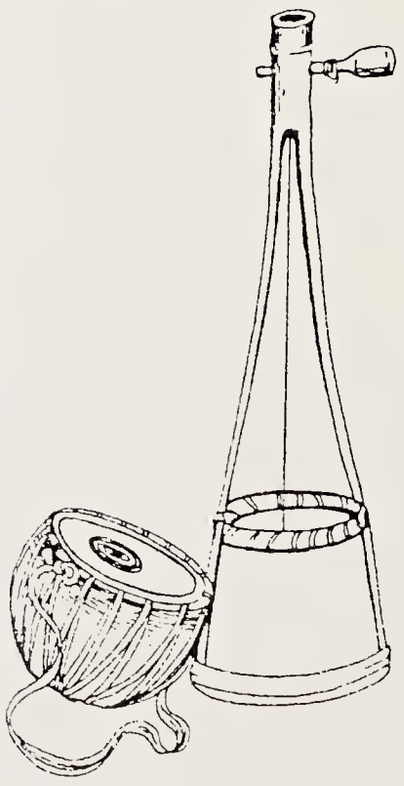
Banam



Bena



Murli / Tiriye (Aar-Banshi)



Duggi / Gopiyantra

their secret yogic rites and to roam the countryside disseminating their mystic message through songs and dances.

The simple musical instruments that the Bauls use are often made by themselves. They take help of the village carpenters as well as the Doms - the skinners of animals, the Bayens - the traditional drummers and musicians of the village and Akure-Doms - the makers of bamboo basketry. Ripe gourds are collected from the farmers and dried after removing the pulp for use as a *tumba* or the resonator for some of the instruments.

A Baul generally uses a few very effective instruments. He/she is ever on the road and often alone, which perhaps has necessitated his / her having a strictly limited number of light instruments, all of which he/she can handle and play upon himself/herself while singing and dancing.

The most important of the Baul instruments is the *Gopiyantra* without which a Baul dancer would be inconceivable. The Baul dances with soft and graceful movements with the *Gopiyantra* raised above his head in his right hand, producing a beautiful rhythmic vamping sound by plucking the lone central string with the index finger and pressing the two bamboo ribs to inflect the tone.

The Baul often carries two other musical instruments with him. One is a small conical drum called a *Duggi* or *Bayan* and the other is a strange string instrument called *Khamak* or *Ananda lahari*.

None of these musical instruments is used for creating a regular melody. They are all employed as drones and rhythmic adjuncts. The *Gopiyantra* has a small body, a hollow wooden cylinder of nearly 20 cm. in height and 12/15 cm. in diameter, tapering slightly towards the top. Sometimes it is made of a hollowed out dried gourd as well. The bottom of the cylinder is closed with leather parchment and two prongs of a bamboo fork, about 60 cm. in length are nailed, or fixed otherwise, to two sides of the resonator. There is a peg at the top from which a single string passes between the forks to the centre of the leather bottom.

The *Khamak* is a more unsophisticated instrument. It also has a gourd or hollowed wooden resonator with a leather bottom through which a gut string of about 60 cm. in length passes out of the vessel. The free end

of the gut is again attached to the leather cover of a small hollow metal or wooden bowl. To play it, the musician holds the resonator under his left armpit and the small bowl attached to the stretched gut in the fist of the same arm. With a wooden plectrum in the right hand, the Baul plucks the string and as he does so, he jerks the hand holding the instrument, almost imperceptibly. The result is an indefinable tonal and rhythmic effect which in a master's hands can hold one spellbound for hours.

The small *Bayan* is almost a part of the Baul's colourful dress of a long patchwork cloak belted with an ample scarf wound round his waist. The *Bayan* is inevitably slung from his left shoulder and held above his left thigh secured by the scraf. While dancing and singing, the Baul uses the Bayan as an accompaniment to the *Gopiyantra* by playing it with his left hand. The *Khamak* described earlier is sometimes carried by a second Baul, often his female companion who plays it with great flair, as she joins in the singing and dancing.

Other musical instruments generally in use among the Aauls, Bauls or the Sufi Fakirs and Mursheds and in the *akhada* of the Vaishnavite Bairagis are the stringed instruments *Ektara* and *Sarinda*, metal cymbals like *Kartal, Khanjani* and *Mandira*, bells like *Nupur* and *Ghungur* and drums of different kinds *Mridanga, Shrikhol, Daff* and *Khanjira*. The Mursheds (Sufi hermits) use long iron tongs called *Chimta* held horizontally and played as a musical accompaniment to their beautiful songs and subtle dance movements.

The *Ektara*, meaning single-stringed, has a resonator made of the bottom one-third of a dried pumpkin and a *danda* or the hollow rod, often a length of bamboo for holding the stretched string inserted into it. The hollow pumpkin resonator is covered with a skin-parchment.

Sarinda has a very interesting waisted shape. It is made and used usually by Muslim Aauls and Fakirs. A bowed lute, its smaller lower half is covered with skin and the upper half left open. *Sarinda* is played with a bow to which a few bells (*Ghungur*) are attached to give a jingle of rhythmic sound.

Kartal, Khanjani and *Mandira* are cymbals of different sizes and shapes giving different kinds of sound. *Mandira* is a small pair of cymbals played with graceful movements of the thumb and index finger of both the hands. Cymbals are used as accompaniment to all devotional

songs in Vaishnava *akhada*. Men and Women Bairagis go round the village early in the morning playing the *Khanjani* and singing in praise of God.

Nupur and Ghungur are bells worn by the Bauls and other folk as well as classical dancers on their feet and ankles. The *Nupur* is made of thin hollow silver, copper or brass tube formed into a oval ring fitting the arch of the foot below the ankle. Small beads inside the tube make a musical sound when there is movement. *Ghungur* worn on the ankles as bunches sewn on leather straps are hollow metal forms shaped like flower buds with small beads inside forced through narrow openings. Both these accessories have a low and sweet musical sound.

As already mentioned, many folk musical instruments like the *Gopiyantra, Ektara*, etc. are often made by the users themselves with help from the village crafts people. Sometimes, some *akhada* having skilled instrument makers become popular supply sources for a wide area around.

The cymbals are made by the copper-smiths of places like Vishnupur and Navadwip - the traditional centres of Vaishnava culture in Bengal.

Nupur and *Ghungur* are often made by some groups of semi-tribal metal casters - the Dhokra-Kamars or Malhores. A Dhokra group of the Maldah district are well-known makers of *Nupur* and *Ghungur*.

The *Mrindanga* and the *Khol* or *Srikhol* as it is called by the Vaishnavas are two very similar drums in Bengal, Assam and Manipur, used by the Vaishnavites for congregational singing and dancing. Although the word *Mrindanga* means - the body of clay - *Mridanga* of today mostly have wooden bodies but the body of a *Khol*, even today is of burnt clay.

Burnt clay or wooden bodies of these drums are about 60 cm. in length. The shape is that of a barrel with a bulge at the centre. In case of *Mridanga*, the right face is slightly narrower than the left but in *Khol* the left face is much wider. The heads are made of multiple membranes stitched to the braids of leather on both the sides. The two faces are held together tightly by leather straps which pass in and out of the braids on both sides across the body. The *gaab* paste as mentioned earlier is applied in layers as a thick small circle on the small face of the right side and as a thin larger circle on the larger left face to achieve a certain tonal

quality of sound. The pitch of these drums is adjusted and fixed while making.

The *Daff* and *Khanjira* are single faced frame drums. The *Daff* is much larger than the *Khanjira* and the latter bears a set of small brass discs fixed loosely in pairs that produce a pleasant tinkle while it is played. The *Khanjira* is also found among gypsies of Europe and is called tambourine.

The instruments known by different names in different areas have metal or wooden frames covered with skin on one side. The *Daff*, about 60 cm. in diameter with about a 10 cm. wide frame is usually hung from the neck and played with two thin sticks. The *Khanjira's* face is about 20 cm. or less in diameter and often covered with parchment or skin of a local lizard of iguana family called *'gosaap'* in Bengal. It is held in one hand and played by striking it with the fingers and palm of the other. Both these drums are generally used by the Aauls, Fakirs and Mursheds and are often made by themselves.

Folk singers of north Bengal use two stringed instruments and a variety of flutes and drums as accompaniment for their songs. The stringed instruments are *Dotara* and *Bena* of many local variations. The *Dotara* is a simple four-stringed lute played by plucking the strings with a wooden plectrum and used as accompaniment for the rich folk songs of north Bengal or for solo performance of great beauty. The *Bena* is somewhat like *dotara* but played with a bow.

Both *Dotara* and *Bena* are made by village craftsmen in north Bengal. Instruments made in Koch Bihar are most preferred. In Birbhum and Burdwan districts there are craftsmen who also make simple *Dotara* and *Bena* for the local musicians. None of these instruments has a fret board.

There is a folk form of *Sarengi* made in Malda district. It has a beautiful sculptural form and is perhaps a later development from the *Sarinda*. *Sarinda* is played only with folk music whereas the *Sarengi* is played both with folk and classical. Both these instruments are played upright and are non-fretted. They are both bowed instruments and the folk *Sarengi* is found throughout northern part of India with regional variations.

The classical or concert *Sarengi* is wider to accomodate many *tarab* or sympathetic strings arranged under the four main playing strings at least two of which are made of gut.

The whole body of the *Sarengi* is made from one piece of wood. The shape is carved out and then from the lower resonator to the neck with its extension is made hollow. The sound chamber has a waist that allows for the movements of the bow. While this part is covered with a parchment, the wide finger board has a flat wooden plate on top that ends in the peg box.

There are two distinct characteristics of playing a *Sarengi* — one – the stings are stopped on the sides while playing using the nails of the fingers, and two - the bow is held with the palm facing outward.

The conch shell, a gong called *Kansar* and a bell - the *Ghanta* accompanied by the large drums *Dhak* and *Dhol* are the usual musical adjuncts to Hindu religious festivals in Bengal. The bells and gongs are made by traditional metal workers in old crafts centres like Vishnupur, Navadwip and Calcutta, but the drums are made by the so-called low caste Akure-Doms and Bauris all over West Bengal.

The *Dhol* and the *Shehnai* flute, are also used for marriage and other social ceremonies all over Bengal.

In north Bengal, there are many forms of folk musical traditions like *Bhawaya, Gambhira, Khon, Alkaf, Gajan,* etc., where the *Dotara, Bena,* different kinds of drums - *Dhol, Dholak* and *Nakada,* the flute - *Shehnai* and the gong - *kashar* are played.

We have already discussed the conical *Nakada* drum earlier. The other drums - *Dhak, Dhol* and *Dholak* have barrel shaped bodies of wood hollowed out from inside. Length of these drums varies from about 40 cm. to about 90 cm., and the diameter of the mouth, equal at both ends also varies from about 15 cm. to 45 cm. The open mouths are covered with hides stretched around with leather hoops fastened to the body and kept taut by means of thick rope or leather straps.

Dholaks are generally played by hands (palms and fingers) on both the faces, the *Dhol* by striking one face with hands and the other by a wooden stick and the huge *Dhak* slung under the left arm from the

shoulder with only one drum face at front is played with both the hands with thin bamboo or wooden sticks. None of these drums has a playing surface covered with *gaab* paste.

The *Shehnai* used both by the folk and classical musicians is a difficult instrument to play. It is a double-reeded wind instrument with a small gap between the two reeds fixed to the blowing hole of the playing tube. The tube, generally made of ebony or black *sisum* wood, is the main body of the instrument. Its resonator is also conical in shape, gradually opening out from the narrow mouth piece into a metallic 'bell' at the bottom. Compared with the classical *Shehnai* the folk instrument has a slightly different but very sweet sound.

There are eight or nine holes along the tube of the Bengal *Shehnai* which is about 30 cm. long. The upper seven are for producing musical notes and the rest left open or plugged with wax for raising or lowering the fundamental pitch of the instrument.

The *Shehnai* is always accompanied by two instruments similar to it in appearance; but they have only two or three plugged or partially plugged sound holes to produce a suitable drone.

Used all over India in different names, sizes and local variations, the *Shehnai* perhaps, has a distant West Asian origin. Whatever it might be, the Indian *Shehnai* is the finest wind instrument of it's kind in the world today, developed and nurtured by folk cultures of the subcontinent.

In the hill areas of Darjeeling district, the population is predominently a mixture of many Himalayan races. Along with use of gongs and cymbals of different kinds made in Nepal, Sikkim, Bhutan and also Tibet, they make mostly at the Bhutia *basti* of Darjeeling town a variety of highly decorative trumpets including a blowing conch shell with elaborately decorated flared megaphone of metal.

One of the very interesting trumpets is the ceremonial trumpet of the Bhutia people called the *Thanchen* blown by monks during Buddhist ritual dances and music. The huge trumpet is nearly three meters long and made of copper decorated with silver. A pair of these is generally employed together to announce commencement of ceremonies from the temple or the *gumpha* as also to accompany the dances. Because of the unwieldy length and weight of the *Thanchen*, the flared end of it is rested

on the ground or on a special stand. In movement the *Thanchen* is carried on the shoulder of a monk.

The Bhutia craftspeople also make the ceremonial drum *Gnu* — a rare bi-facial frame drum, *Gnu* has a diameter of about 50 cm. and a depth of about 10 cm. with both sides of the frame covered. The instrument is held by its long handle and beaten by a curved stick called *Gnyataa*.

The *Khangling* a wind instrument like the *Shehnai*, but about double its size in length, decorated with silver and copper (now white metal and copper) is also made in Darjeeling. All the hill instruments mentioned above are examples of Buddhist material culture of the Himalayas.

Cultural basis of the musical instruments of India is very much mixed. Like the material culture all over the country they express at once the unity and diversity of Indian society. Indian civilisation is a confluence of many currents and unity is the result of more than 5000 years of cultural interactions betwen diverse ethnic and religious groups. Its diversity results from extreme climatic, geographical and ethnological differences in different parts of the country.

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Musical instruments as cultural reflex : a case study of the Santal *Tirio**

Onkar Prasad

The *tirio* is one of the wind musical instruments of the Santal tribe. Here, taking it as an object of Santal material culture, an attempt has been made to develop an understanding of some aspects of their non-material culture.

The *tirio* is a tubular wind instrument. It is constructed always in pairs with the same pitch, it is of varying length ranging from 2' to 3' (60 to 90 cms.). It is constructed from a special variety of bamboo — *bar langa mat'*, a species of bamboo with long spaces between the nodes, large cross-section and thin wall (Bodding 1929:234). There are altogether seven holes in the *tirio*—one blowhole and six finger holes. First of all, a bamboo cut for the fabrication of the *tirio* is allowed to be seasoned for a week or so. After a sizeable piece of bamboo is cut, its outer circumference is measured and a blowhole is made with a red hot *taku* (pointed iron rod) generally at a distance half of the circumference from the first node. Then the first hole is made at a particular distance from the blowhole. The sixth hole is made away from the first one at a distance equal to the distance between the blowhole and the finger-hole. The length between the first and the sixth hole is divided into five equal parts and the rest of the four holes are constructed. These holes, made with care, are of equal size. More the area of cross-section of the bamboo tube, larger is the size of the holes and *vice-versa* irrespective of its uniformity of size (See sketch no. 1).

When the *tirio* has been constructed by the Santals, sometimes, flute motifs like bird, animal, leaf, ritual space, etc., are drawn on its surface.

After the *tirio* has been constructed finally, an invocation is made to

Tirio is a variant of flute

it for the first time by the individual Santal uttering the following words :

Benaokedain, rohorkedain, jutkedain jeno rehetho rehete anjom (I cut you, dried you up and tuned you to make you as you should be so that even the root of the bamboo tree may hear your sound).

After invocation the *tirio* is blown holding it in a horizontal position, the blowhole being under the lips and the other six holes under the three fingers (fore, middle and the ring fingers) of the left hand and the three fingers of the right hand respectively.

The tirio in oral literature

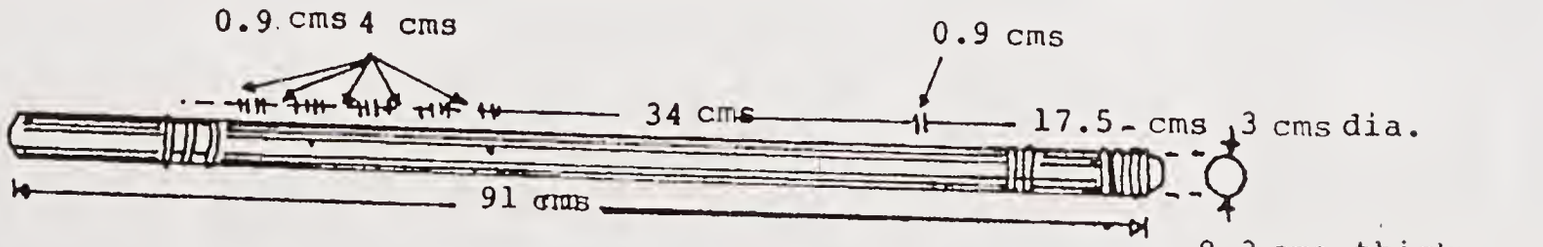
The *tirio* being the most favourite musical instrument of the Santals, figures most in various genres of their oral literature like riddles, myths, narratives, poetry, etc. In riddles it is described as a 'crying child' when taken to the end of the village or when kissed. In a myth it is described to be an embodiment of human being. As the myth runs :

> After the death of Pilcu Budhi, she was buried by her sons in the vicinity of the village. After sometime, there grew a beautiful bamboo tree. The voice of Pilcu Budhi was regularly heard coming from the tree. Once, one of the sons thought of making an instrument that would produce sound resembling that of the human voice. When he went for cutting the bamboo, a voice was heard coming from the underground. The voice said, "cut its middle portions from which you could construct two flutes, one of 'weal' and another of 'woe'. When you play the flute of weal, I would know that the villagers are living happily but when you play the flute of woe, I would understand that the villagers are suffering from miseries". Listening to this voice the son did likewise and constructed two flutes – one of weal and another of woe.

In narratives the *tirio* is thought of being capable of establishing relationship with the supernatural forces. As a story goes :

> There was a cowherd boy who used to graze his buffaloes all alone. He had a flute and from time to time played sweetly on it. There were two *bonga* girls and when they heard the flute they lost their hearts. One day they went to him in human form and the three laughed and joked together. The next day the two girls went again and said to him' "You have seduced us with your

1.



construction of Tirio

(Scale 1=5)

2.

Houses for the spirits constructed during marriage

3.

Houses for the spirits constructed during the sohrae

flute. We have come to make you our bridegroom". (Source : Archer, 1974:287).

In Santal songs, the *tirio* is viewed as symbolic of sex, love and seduction. Here is an example of a song in which the *tirio* has been used as synonym for boy.

By the banks of the river
Do not play your flute
Flute, the date is near.
The rice-beer has been made
Do not make muddy
The water of the spring (*Ibid* : 141).

In another song seduction is implied by the phrase 'striking with a flute'.

Beyond the mountain
The ring *dove*(girl) is cooing
Under the mountain,
The boys are with the cattle
With a flute they struck the dove
O my friend, go slowly
Very slowly (Ibid : 69).

Utility of the tirio

The *tirio* is generally used by the Santals as an accompanying musical instrument to singing, dancing and drumming on various ceremonial or festive occasions. It is also played for recreation by the cowherd boy when grazing the cattle in the field, by the Santal labourer when returning home in the evening after a day of long hard labour.

When a Santal lover finds his beloved not arriving at the meeting place he, after waiting for a long time, leaves his *tirio* as an indication of his being there.

Apart from these, the *tirio* has some socio-political significance. During the Santal rebellion of 1855, the rebellious Santals invading the villages of *dėko* (non-tribals) told their community members to hang up the *tirio* at the end of their village street so as to distinguish the tribal inhabitants from those of the non-tribal ones (Culshaw and Archer as referred to in Dutta-Majumder, 1958:27). Thus, the *tirio* is intricately associated with Santal life to the extent that the Santals identify themselves with it.

*Italics mine.

SUMMING UP

In this paper I have tried to give a description of the morphology of the *tirio*, its references in various genres of the Santal oral literature and its utility in Santal life. From these it is observed that the *tirio* in Santal culture is symbolic of male sex, love and seduction. The Santal also identify themselves with it.

The *tirio*, as prescribed in its origin myth is always constructed in pair. The two are of equal size and similar in shape and also when sounded together are in unison. Likewise, the Santal life is a blend of weal and woe.

In Santal thought the *tirio* is an extension of the human being. The myth related to it does conform to this. The *tirio* is also believed to bridge the gap between the living and the non-living elements of nature.

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Traditional textiles of Bengal

Atul Chandra Bhowmick

The traditional textiles of Bengal do not belong to a particular period. For untold generations the weavers of Bengal have delighted in the art of weaving which is a collective endeavour and had never attached any great importance to individual artistic talent as such. The art of weaving is transmitted from generation to generation without much change in the basic principle of weaving technique, its root reaching deep into the soil.

Textile in Bengal can be traced from very early days. Indication of it supplied by Bengal temple terracotta figurines and statues surviving from the past have to be relied on. The clay figurines supposed to represent the mother goddess may probably be taken to indicate the normal attire of women of earlier times. Cotton has been used as the staple raw material of textile in Bengal from a very early time and it is termed *kapasa*[1]. The term has been mentioned in the religious texts and works of Manu, as the fibre from which the sacred threads worn by the twice-born were spun. History gives us enough information to prove that Bengal has had quite a rich tradition in the art of textile weaving from a very early age and it has attained significant achievement in the history of textile. Bengal has been famous for cotton and silk weaving, embroidery and printing from a very ancient age. The richness and variety of her textiles had made Bengal earn an abiding reputation for the refinement of the threads used and the designs of the woven decoration which embellished the body of the textile. It is widely known to all that the muslin had a very fine weave and it had become a veritable legend in the past. Muslin, *jamdani, baluchari, kasida*, etc. once enjoyed undisputed celebrity in the history of textile. Numerous references to fine cotton textile are found in Megasthenes's *'Indica'*, Kautilya's *'Arthashastra'*, 'Periplus of The Erythrean Sea' and in many travel ac-

counts of the western and classical writers of early age. The 'Arthashastra' also refers to textile design workshops being established under royal patronage. The workshops employed proficient spinners, weavers and embroiderers. Gifts of scents, *anjan*[2] (collyrium) for the eyes, oil, flower garlands and other adornments were given to the workers to increase their joy and zest in their working. All these sources would indicate a considerable antiquity for such textiles of Bengal.

Reference of textiles in the ancient literature

The *Rigveda* bears numerous references to dress. According to its evidence, dress in those days consisted of two garments, *viz.* the *vasa* (lower garment) and the *adhivasa* (upper garment) ; though in the days of the later *Samhita*, the *nivi* (under garment) had also come into use[3]. At the time of Manu, as would appear from his writings, not only spinning and weaving had been well known, but also starching and other operations. Even during a period earlier than that of Manu the art of weaving is known to have attained a high state of excellence. The *Rigveda* contains passages which refer to the art of weaving. Usha, the goddess of dawn has been described as 'clothed in radiance' (7.77.2). One of the hymns of the *Rigveda* personifies 'Day and Night spreading light and darkness over the extended earth like two famous female weavers weaving a garment' (11.3.6). From this statement it may probably be deduced that weaving was generally practised by women. The statement *'Vangakam dankulam srestha'* found in the 'Arthashastra' of Kautilya refers to the soft cloth quoted as *dukula*[4]. *Dukula* was a variety of woven product revealing the smoothness of a gem and the transparency of water. The two expressions would seem to describe the nature and quality of the *dukula* cloth of Vanga. The cloth *dukula* in all probability was the forerunner of what came to be known as muslin in later time. This very textile was probably the fabric mentioned by Pliny and this was very richly prized in the courts of Rome. Megasthenes has mentioned in 'Indica' in glowing terms about the flowered muslins[5] of the finest weave. These muslins may be considered as the precursors of the variety of textile known as *jamdani*. Dr. Mati Chandra in 'Prachina Bharatiya Vesha Bhusa' has indentified the *chitra virali*[6] (pictured muslin) and the *pushpapatta*[7] (flowered cloth) mentioned in the ancient text as *jamdani* fabrics. From the writings of Western scholars it had been known that the Roman ladies at times, had a great love for fine muslins of Bengal and Pliny had made known his remorse because of the huge drain of imperial gold for the import of fine textile products from Bengal. Even

duing Emperor Claudius Caesar Nero's reign (54-68 A.D.), delicately translucent muslins were held as fashionable in Rome under such names as *nebula* and *venti*[8] textiles (woven winds), the latter exactly translating the name of *baft-hawa* (woven air), a special type of muslin woven in Bengal during the Mughal time. The historical evidences lead to the fact that Bengal *muslin* had enjoyed extensive popularity in Rome. The products of the early weavers have been compared to exquisite poetry of colourful fabrics in our ancient literature[9]. Kalidasa in his famous 'Kumara Sambhava' has described the dress of a bride as the garment of silk adorned with the grace of a swan. A few lines of an English version of the poem appeared in *Indian Fabrics in Indian Life, Textiles and Ornaments* by Pupul Jayakar which read as follows :

Summer : In the hot breathless summer, maidens shed their lime green veils from masses of dark hail from quivering shoulders.

And now, they apply sandal paste to their breasts and cover them with transparent clothes ...

The Rainy season : Young girls wear garments of white about the hips.

The season of Frost : Women of fashion use perfumed powders and wrap their bodies in heavy silks.

Spring : Maidens wear silk garments dyed yellow or red with the juice of the *kusumba* flowers ... In their garments are woven bright flamingoes[10].

These lines give us a vivid description of motifs, designs and indigenous colour combination met with in the garments worn by the women of the time. In another work, 'Ritu Samhara'[11] he gives a description of the fine robes worn by the maidens, coloured differently to suit different seasons. Contemporary literature also gives us the names of varieties of *sari* such as *hamshapaduka* which displayed figures of swans, *hiranyadrapi* which displayed as shining gold, etc.

Evidence in sculpture

Early Bengal sculptures and terracotta plaques give us enough information in regard to the evidences of the traditional textiles of different places. The sculptures often reveal that the figures were clad in dresses made of textiles of very fine texture, almost transparent to look at. This

lead scholars sometimes to miss the existence of any drapery on such figures and declare those to be shown as nude[12]. The female dress as observed in terracotta figurines reveals that the women always wear enormous bangles about the wrists and strings of beads round the the neck, but their body clothing is generally limited to a bead belt round the body below the waist (Fig.1). From this belt slips of cloth are some times suspended, more generally at the sides or behind than in front, and sometimes like the *dhoti* of the male sex, is also added, but when that is the case it is represented in the figurines generally as absolutely transparent. The display of the garments in tune with the fluid linear rhythm of these figurines can be taken as the keynote of style of female figurines. Female figurines also show diaphanous drapery which consists of an upper and a lower garment which cling closely to the body and folds are shown in schematic lines over the arm and upon the body[13]. *Yakhini* and some female figurines appear at first sight to be nude. But on close observation the folds at the borders indicate that the figures were in fact shown as properly clothed. Their dresses are so transparent that even the contours of the supple body can be clearly discerned and indicate the climax of textile art which had once flourished in India.

Evidence in painting

One way of tracing the evidence of the traditional textiles of Bengal is examining costumes depicted in paintings. In the magnificent company painting and Bengal School of painting, we find indications of textile designs of a very extensive variety. The prominent designs found in painting can be enumerated : bands alternately filled in with geometrical patterns such as chevrons, stripes, circles, formal floral motifs or scrolls entwined, dot-patterns and diagonal bands. The women's garments were often painted blue, perhaps a colour always popular with the Hindus for the poets have often sung of the charm of a pale complexioned damsel dressed in blue being like a dark cloud lighted up by the radiant fire of beauty. The varieties of dress which appear in the paintings reveal the unbounded wealth of imagination regarding design, texture and colour combination of what the early weavers of Bengal had i.e. a complete mastery over the weaving at that time.

Reference of textile in foreigners' travel accounts

The early historical travel accounts of foreigners furnish us a glimpse of the early dresses of people. An eyewitness account of the dress worn by the people at the time of Harsha was given by Hieun Tsang. His

travel account gives information pertaining to raw material, dresses of either sex, method of weaving, etc. He made mention in his account that the dress of the people was not cut and had an affect of fresh white garment.

The traditional textiles had gained a new efflorescence under the patronage of the Mughal rulers. During the period numerous varieties of designs came to be produced under the fresh impetus which is the prerequisite for the healthy development of the art of textile. New techniques and new types of textiles, characterised by a profuse display of colours, motifs and designs, were introduced. Under Emperor Akbar, the peaceful condition of the country had enthused the weavers to practise their weaving and the royal patronage provided to the development of textile industry paved the path of glory. As an encouragement to the industry he had made settlements of the weavers and bestowed liberal patronage upon them so that they could practise and develop their crafts under helpful condition and a spurt in the textile art under the favourable condition had been seen. In the 'Ain-i-Akbari' (Institute of Akbar), Abul Fazl Allami tells us about Akbar's love for textile and his regard for his weavers. Akbar established many factories, called *malboskhas cootiy (Karkhana)* and these were supervised by officials known as *darogha* (native superintendents). In these factories varieties of textiles were manufactured for consumption of the royal families. Emperor Jehangir took a personal interest in such factories and finest qualities of muslin and *jamdani* were produced in those establishments. Shah Jahan was a great lover of the arts. His infinite love for magnificence had also caused a great impact upon this art of textile weaving. During his period traditional textile of Bengal had reached its highest stage of sophistication and perfection. Aurangzeb, also did not fail to patronise the weaving of fine muslin and *jamdani* of Dhaka for royal use. Though he had preference for simple and unostentious life, he also could not disregard the charm of fineness and beauty in textiles. He as well as the other members of the royal family had to appear in the usual royal dresses for which a considerable supply of fine muslin and *jamdani* was required. Thus we see that all the imperial Mughal rulers evinced personal interest in the development of the textile art. Taylor[14] writes that in the Mughal period several government factories were maintained at Dacca and neighbouring places for the manufacture of fine muslin on account of the royal wardrobe at Delhi and that very expert weavers were employed there[15]. After Aurangzeb the history of Mughal textile, like the history of the Mughal empire, is one of decay.

If one delves deep into the history of the past, one may come across many references regarding other textiles of Bengal. It is known from historical evidences that Bengal was also famous in silk textiles like those of cotton products. As early as 1406 A.D. it was mentioned by Manhuan[16] that silk cloth of Gauda (Malda) in West Bengal had a wide popularity for its quality. It is quite possible that the famous *baluchari* textiles of a much later date was the culmination of such silk textiles of early days. Printed textiles especially *namabali* might have been largely produced at Navadwip during the reign of Sultan Hussain Shah of Bengal. The *namabali* were said to be largely used by the followers of Vaishnava faith as *uttariya*. It is definite that weaving was an important craft in the early past..

The traditional textiles of Bengal are quite diverse in form and variety, a study of which, though in a very limited scale, has been made.

Muslin

Among the artistic textile products of Bengal, muslin had undoubtedly acquired the widest possible reputation. Though Bengal had in every probability been the source of the fine cotton textiles known widely outside India, the name muslin was exclusively acquired by the textiles woven in and around Dhaka.

The word muslin might have derived its name from the city of Mosul[17] in Mesopotamia where the material was once made. The other most prevalent view in that this textile acquired its name muslin from Maslipattanam, a port city in Tamilnadu through which the cloth was exported to European countries and Egypt. It has been identified that the mummies' bodies were draped together with herbal medicine by muslin as bandages as early as Ist century B.C.

The textile known as muslin has been a pride product of Dhaka. But it transpires from various accounts that this product had been designated in the past in different terms. Forbes J. Royle wrote in his book *Early History of Cotton* that the Greeks called the muslin as *gangatika*[18] as well as *gangikiti*[19] as it was produced in the valley of the Ganges. It may be quite relevant to mention that some early poets of Bengal had referred to fine cotton textile as *ganga-jali*. In 73 A.D. Roman historian Pliny was aware of the substantial part of exports of textile from India, more particularly from Bengal and spoke highly of the excellence of the Bengal muslins[20] and he, who wrote *Natural History* said that there was, "no year in which India did not drain the Roman Empire of a hundred

million Sesterces"[21], which is equivalent to 15 million rupees. He further refers to muslins and describes these as of superior excellence. This shows that the industry was at a very advanced stage of development in early days. He further referred to this type of fine textile as *karpasiam*, apparently a derivative term of the Sanskrit word *karpasa*. The ruling class of the Roman Empire grudged nothing to pay for muslin from Dhaka. The courts of the Mughal dynasties used to send muslin as presents to their vassel princess, to officials, to foreign envoys, nobles and well-groomed court ladies. The fabric was so prized by the recipients that they were placed in their tombs after death.

The raw material of muslin is cotton. However, Bengal is not at present known as a mentionable producer of cotton. But at one time cotton was not only grown in Bengal, some foreign travellers took notice of the fact that much care was taken here for the production of cotton. W. W. Hunter states that cotton was grown in Dhaka and the adjoining fertile regions of Bengal[22]. Marco Polo also refers to the production and manufacture of cotton in Bengal. But the Bengal cotton yielded coarse and short fibres. The superiority of the Dhaka muslin was not attributed to the raw material alone. The matchless quality of the muslin textile was conditioned probably due to the following facts :

1. There was the force of tradition.

2. The hereditary experience and skill in spinning and weaving

3. There was the factor of climatic influence. One explanation of the fact is that the damp and moist climate of Bengal has facilitated weaving of fine textile.

Spinning : The spinning is invariably done by women of tender age. The spinner turned the spindle (*takua*) between the thumb and the forefinger. The spinner at the same time, drew out the single filament from the quill. The cotton was twisted into yarn upon the spindle. After spinning a certain quantity of the yarn, it was collected upon a reed by winding up the spindle. A certain degree of moisture combined with a temperature of about 72°F[23] was best suited to this operation. Spinning of muslin thread was usually done in the rainy season or early in the morning till about 9 or 10 o'clock or late afternoon. When the air was dry spinning was done over a shallow vessel of water, the evaporation of water imparted the necessary amount of moisture for spinning. Otherwise, the delicate threads were liable to snap at the time of spinning. Clear eyesight and deep concentration of the young spinners, apart from their tender flexible fingers helped much in the spinning operation. The

standard quality of the yarn used in the manufacture of muslins intended for the court of Delhi was said to have been 150 cubits (= one *hath* =18") of length per 1.75 grains (= one *ruttee* as per Indian weight and measure systems) of weight.

Reeling : The operator held winder (*natai*) between his toes and wheeled the bamboo *natai* while the yarn was passed through between the thumb and forefinger. Thus the yarn was reeled into skein (*feti, lachi, lar*).

Warping : Earlier for warping (*tana*) four short bamboo sticks were placed, the whole forming two parallel rows of rods about four feet apart. The space between the two rows of sticks served the purpose of a path for to and fro movements at the time of warping. The worker held wheel (*charki*), made of bamboo strips, thick with the warped yarn by hand and arranged the threads crosswise, *i.e.*, the thread was held outside of a rod and inward of the succeeding one and so on, over the rods with the help of a bamboo stick having an iron hook at its one end. The hook facilitated and controlled the movement of the thread when the process of warping was in progress. He continued to traverse forward and backward by laying the warp threads.

Reed preparation : The reed (*shana*) was generally applied to the warp threads after preparation of the warp. The reed was made of fine splits of bamboo firmly fixed between ribs of split bamboo. The finest reed used contained 2,800 dents in 40 inches. One end of the warp was unfolded and allowed to hang down up to a height of a foot above the ground. Two workmen sat, one on either side of the warp. The man in the front passed the iron wire through the first division of the reed to the man on the other side. The second person twisted the ends of the two outermost threads and helped the first workman to draw back the twisted threads through the reed. In this manner wire was introduced through all the divisions of the reed and two threads were drawn through each of these. The ends of the threads were knotted and gathered in bunches. A bamboo rod was passed through the loops formed by these knots. After completion of the aforesaid work the warp was brushed with the help of a comb in order to separate the threads from each other. The portion of the warp thus arranged was wound upon the warp-beam and then a portion next was unfolded and arranged. In this manner the work used to go on until the whole was completed.

Heddle : A portion of the arranged warp behind the reed was stretched

out horizontally for preparing the heddle (*baw*). A broad piece of bamboo was then placed between the threads of the warp so that the threads might have sufficient room to form the loop of the heddle. A string was unwound from a wheel. This string was passed to the opposite side of the warp. The weaver then dipped his forefinger between the outermost thread of the warp and the one next to it and brought up the string which passed inside the wood and then crossed round the cane above. Thus a loop was made. The same process was repeated between every two threads of the warp. A loop encircled a warp thread and there were as many loops as the number of threads. The loops of each set thus encircled the alternate threads of the warp. During the operation alternate threads of warp were made to rise and fall with the force applied by the weaver to the upper or lower set of loops of the heddle.

Weaving : The loom used for weaving of muslin at Dhaka had been horizontal in shape. The treadles were made of pieces of bamboo and placed in a pit dug in the ground, usually measuring $3' \times 2' \times 1\frac{1}{2}'$. The shuttle was made of light wood in spear shape. It used to have a space in the centre in which a movable iron peg was placed longitudinally and the reed was fixed in the peg. The weft thread used to pass from the reed when thrown off, through a side eye of the shuttle. For keeping the cloth stretched during the process of weaving, two bamboo pieces, with brass pins at the terminals were connected together with cords. The contrivance was bow- shaped and was locally termed *katani*. The pins were inserted into the edges of the cloth. The weaver sat upon a wooden board (*pidi*) or mat placed at the edge of the pit. He put his feet one on each treadle and pressed those alternately, thus forming a shed in the warp. The weaver pushed the shuttle from one hand to the other with a little force and the weft thread was kept in properly by pushing it backward with the lay. This process was continued till the weaving was finished. As soon as a portion of the cloth was woven, it was rolled upon the cloth-beam and simultaneously an equal portion of the warp was unwound from the warp-beam. For reducing the impact of friction of the threads with shuttle, reed and lay, mustard oil was occasionally applied and this is still in practice. The time required for the weaving of a piece of muslin depended on the quality of the fabric, natural aptitude, hereditary instruction to youngs, constant practice and the skill of the weaver employed in making it. The *malmal-khas* and *sarkar-ali*, the finest varieties of muslin, took about five to six months to be finished. Much less time was taken in the manufacture of coarser fabrics and a piece of

inferior muslin could be produced in about a week and a piece of such inferior muslin would cost a low price. The time required in weaving different varieties of muslin fabric was different. A piece of muslin of the usual dimensions of 20 yards by I-yard required from ten to thirty days in average to weave; if of the ordinary plain, from ten to fifteen days; if of the fine, twenty; the superfine, thirty and very superfine, forty to forty-five days. Many of the finest muslins required eight and ten months. That a piece of muslin could be manufactured with the simple and crude indigenous loom of Dhaka can be vouched for from the statement of Forbes J. Watson who wrote, "with all our machinery and wonderous appliances, we have hitherto been unable to produce a fabric which for fineness or utility can equal the 'woven-air' of Dacca"[24]

The manufacture of fine muslins of eastern India, such as textile breeze, evening dew or running water, required a high degree of specialization, and it was the exclusive occupation of the weavers. The machinery required by the weaver to manufacture finer assortments was small. The process of manufacture was crude. Even the experts wondered how the Bengal artisans could produce fabrics of exquisite delicacy with machinery of the crudest kind. The explanation lies in the fact that the Bengal weaver was endowed with a fine sensibility of touch, a nice perception of weight and he had also a singular command over muscular action. In very hot environmental conditions, it was sometimes necessary during the operation of weaving to place near or beneath the extended yarns of the warp in the loom a few shallow vessels (*gumla*) of water, the evaporation from which kept the threads moist and prevented them from breaking. The coarser fabrics could, of course, be produced throughout the year. But the output was generally much greater in summer than in winter. In Dhaka the period of manufacture was very much conditioned by the period when cotton was gathered. Newly gathered cotton retained a considerable amount of moisture and thread made from such cotton became soft. But, after the lapse of two or three months, it became harder and fit for weaving fine cloth. Hence, threads spun with fresh cotton always became coarse and unfit for weaving cloth of the finer qualities.

Type of muslin : Muslin could be of various types according to the quality of weave and the following main varieties were very famous.

1. *Jhunu-Jhunu* was as fine as the spider's web. It could accommodate 2000 warp threads within a width of two cubits.

2. *Rong-Rong* was also a very fine variety and could have 1200 threads in the warp.

3. *Sarkar-ali* - This was said to be as fine as *jhunu* having about 1900 threads in the warp. It was known that the *nawab* had great liking for this variety of muslin because of its fineness and durability. The *nawab* used to provide *jaigir* to the weavers of this variety of muslin as an incentive.

4. *Khasa-Khasa* was a variety of cloth closely woven and fine in texture. It was named *kashak* in the 'Ain-i-Akbari'. Sunargaon used to produce the finest variety of the *khasa*. It was also known as *jangal khasa* for its close weave.

5. *Sabnam* (Evening dew) - This variety of cloth was as clear as evening dew. It was so fine that if spread on dew washed grasses it was really very difficult to trace the fabric at all. It could accommodate 700 warp threads and the variety of muslin was used mainly by the women living in royal harems.

6. *Abhyayan/Abrawan* (Running water) - *Abhyayan* was so named because of its transparency resembling running water. It was known that this variety of *muslin* was so flimsy that if thrown into the water of a stream, it could be hardly distinguished.

7. *Baft-hawa* (Woven air) - *Baft-hawa* was a fabric of very fine quality and it was said that if thrown in the air it could float like a cloud.

8. *Malmal-khas* (King's muslin) - *Malmal-khas* was used mainly by the emperors of Delhi. This variety could accommodate 1800 warp threads. A piece of such cloth took a weaver almost five months to complete and was priced around Rs.500 to Rs.600 in those days. The weaving of *malmal-khas* could be done only during the rainy season; because the moisture in the air helped to prevent the fine thread breaking.

The finest of the muslin can be found highly glorified in stories of real and fictitious nature. One such story was that once Princess Zeb-un-Nissa appeared publicly in the court dressed in muslin. Her father Emperor Aurangzeb rebuked her for desecrating the dignity of the royal court by being insufficiently clad. She told that she had actually wrapped herself with a *sabnam* variety of muslin garment seven times round and that *sari* she wore was 20 feet long and 20 ozs. in weight.

Tavernier had stated that Mohammed Ali Beg, a Persian ambassador in India, on his return to Persia, presented to his sovereign Shah Safy a muslin turban of 30 yards in length and I yard in width in a pearl-studded coconut shell[25]. It was so exquisitely fine that it could scarcely be felt even by touch.

Another story is that a piece of muslin could only be deemed fit as a present to the emperor if it could pass easily through a lady's finger ring.

Packing : Early mode of packing fine *muslin* was to enclose those in the hollow tubes of bamboo, size being 18 inches in length and 1 inch in diameter. Only the tubes meant for packing fine muslins for imperial use were lacquered and gilded and such tubes were taken out generally in a procession through the town and was sent to Delhi for use in the imperial household.

Centres of muslin production

Murapara, Titabarddi, Baliyapara, Nawpara, Maikuli, Baharak, Charpara, Basketi, Nabigawa, Junglebarry, Bazilpur, Sahapur, Dhamrai, Karpasia, Dhaka were the centres of muslin production.

The weavers of Dhaka had been producing muslins which for fineness and other qualities stayed unrivalled and had not been equalled anywhere else. But with the gradual growth of the British rule in India, this craft was hard hit by forcible contracts at low rates by the employees of the East India Company, by legislation against the cloth and finally by unrestricted import of cloth to India produced in power looms in the United Kingdom. England passed a law prohibiting the sale of muslin in England, seventyfive percent tax was imposed on muslin, while the Manchester cloth products remained duty free. The servants of the Company did not stop here to wipe out the industries. Various are the methods such as by fine and flogging and the levy of high taxes even on spinning wheels.

Muslin was white cloth translucent as ice, light as a cloud and the very name had become a synonym for beauty. The fame of the Dhaka muslin once produced was not attributed to the weavers alone. The joint skill of the spinners, weavers and the great care which was bestowed on every part of the process - all made the muslin famous in the world of textiles. The exquisite beauty of the Dhaka muslins proves that the first,

the best and the most perfect of instruments even employed in the field of manufacture are the human hands. This is true even today. But it is a pity that such fine muslins have been forgotten.

Jamdani

Jamdani is the name of a variety of hand-woven figured muslin of Dhaka and this fabric once enjoyed a world-wide reputation. It is often called *Dhakai jamdani* as it was produced in Dhaka. In French language it has been spoken of as the *Chef-d' Oeuvre* (master piece). It is certainly the most artistic loom decorated fabric produced in Bengal. *Jamdani* (Pers. *Jam-dar*, flowered[26] connotes a variety of fine cotton cloth with flowers woven in the loom. Each design has its individual mode of treatment with shuttle work. The designs are inserted by hand during the process of weaving and hence the embroidered effect. The figured and flowered *jamdani* could have been produced by the weavers of Dhaka who had a traditional experience in weaving delicate muslin fabrics for centuries from the past.

The names of the *jamdani sari* are particularly determined by the character of the different motifs and designs employed to decorate the cloth. *Sari*, a usual wear-cloth of Bengali women, and locally called *than* for blouse pieces constitute the bulk of the *jamdani* production. *Worni/orhna* in transparent crepes used as wrap and veil is also produced. There are various designs to meet the taste of the consumers. A few popular names of these *jamdani sari* are described with their characteristic features.

Sheborga (*she, three; borga*, heads) is the best variety of the flowered textile and the name itself indicate that it has three heads. On close observation it is noticeable that three dots are arranged in the form of a triangle in this manner (⁘), but the dots are not always round. They are often shaped irregularly. These are most experienced productions of skilful weave.

Some of the *sari* are interspersed with ornaments of repetitive dots, scattered all over the body. These dots are connected by horizontal bands of closely set, irregular quadrifoil spots. These are known as the *butidar*. Occasionally, the dots are grouped in diagonal lines and are then known as *tircha buti* or simply *tircha*.

The finest of the *jamdani* is the *panna-hazara* (a thousand emeralds) in

which the floral sprays of golden and silver threads reflect the similar effect of hundreds of scintillating jewels in settings of gold and silver.

Jalar is the name of the *jamdani* which contains floral designs arranged in a network covering the entire field. It is often called *jaldar/jaladar. Jamdani* with running floral patterns covering the entire field have been known as *phulwar/phulwaris.* Very recent varieties are *barela, dhubali* and *jal.*

The cone (*Kalka,* locally called *turanj*) is very widely used at the corners of the *sari* and the body of such *sari* is found covered with small sprays of flowers representing such varieties as the jasmine (*chameli*), the marigold (*genda*) and the chrysanthemum (*gul dandi*). The spray patterns of small circular dots (*chanda*), stars (*tara*), betel leaves (*pan*) and bouquets of flowers (*tora/toradar*) containing large and realistically depicted flowers are seldom used. The *jamewar sari* are characterised for the weave within a pattern of large flower arranged in rows. *Dore-kata/doria* is a striped pattern and *kabutar-khop* is chequered like dovecotes. Occasionally, figure subjects such as *ghorsawar* (equestrian), *hamsa* (ducks) and *mayur-pankhi* (boat shaped like peacock) gliding down a stream are introduced in the borders of the *sari.* The weavers of *jamdani* do not confine their minds to copy the floral, and zoomorphic forms only. They also copy the fruits which they eat as vegetables. A special feature of the *jamdani sari* happens to be their fine ornamental borders of gold and silver threads, having large bold corner pieces. Usually worked on pure black, blue black, grey or off-white background colours, these and many other delicate motifs, denoted by the indigenous names of different flowers, reflect the versatile genius of the *jamdani* weavers. Tanti-bazar, Kalta-bazar, Nawabpur, Demra, Rupganj in Bengladesh, Fuliya, Dhubalia, Shantipur, Dignagar, Nabadwip, Dhanikhali, Begampore, Rajbalhat in West Bengal are the main centres of *jamdani* production.

The terms which used to describe the major designs in the *jamdani* are as follows :

Buti - Single flower or sprays of flower unconnected with one another.

Pan-buti - A *buti* which is heart-shaped or like the leaf of the betel creeper.

Tara-buti - Star-shaped *buti.*

Jamewar-buti - Large flowers arranged in rows.

Chanda - A moon-shaped or circular *buti*.

Dora-kata - Striped design.

Doria(river) - Large striped design resembling the wide course of a river.

The most remarkable thing in these fabrics has unquestionably been their rich variety of designs, some of which, e.g., cone (*toradar*) have been considered to be of Persian origin[27]. No less admirable had been their execution, their perfect finish and the balance and flowing rhythm of the composition, all of which combined to give the *jamdani* its proud position among the traditional textiles of Bengal. Such flimsy cotton *jamdani* weaving is possible only in riverine Bengal, where the air contains such amount of moisture as to prevent the threads from breaking while weaving.

In view of the importance of this superfine fabric, the process of weaving of the figured *jamdani* fabrics deserve particular mention. The weaver sits at the loom. He ranges along the track of the woof a number of cut threads equal to the flowers or parts of the design intended to be made, and then, often with fine pointed stick, he draws each of the threads between as many threads of the warp as may be equal to the width of the figure which is to be formed. When all the threads have been brought between the warp they are drawn close by a stroke of the lay. The shuttle is then passed by the weaver through the shed and the weft having been driven home, it is retured again. The weaver resumes his work, with his skewer and repeats the operations with the lay and shuttle in the manner above described, observing each time to pass the flower threads between a greater or less number of the threads of the warp, in preparation of the size of the design to be formed.

The *modus operandi* employed in making the wonderful pattern of the *jamdani* gives a fair idea about the amazing skill of the weavers. The long warp threads having been duly arranged, the weaving is started as in the case of an ordinary cloth. The pattern is sometimes further elaborated with a number of special weft threads drawn from a number of bobbins to suit the pattern. The *jamdani* may be called a product of the shuttle in which the designs are inserted by hand during the process of weaving whereby an effect of embroidery is created. When *jamdani* of

higher or less value are made, the time required for manufacturing them is proportionately increased or decreased. Production of a good variety of a *jamdani sari* requires many days work.

Jamdani sari produced in several *aurungs* (manufacturing towns) are the most cherished possessions of the women of Bengal and are worn at bridal and festive occasions. Sir George Birdwood once calls the fabric a fine *tanzeb*[28] which was generally made of grey cotton, embellished in bluish-black designs and occasionally with brightly coloured cotton, gold and silver threads. The patronage raised the art of weaving *jamdani* to a pinnacle of perfection (Fig.2). While *jamdani* manufacture was retained in the hands of the Government, the weavers as stated by Raynal, were forbidden, under pecuniary and corporeal penalties, to sell a piece of *jamdani* to bania (a native tradesman) or any person other than Government nominee agents. Weavers were not allowed to weave or to sell *jamdani* at their will. If anyone wanted to sell a piece elsewhere other than *gomasta* (Company's Indian agents), he had to pay a tax known as *chhappa jamdani*. But this tax was abolished in 1792. Merchants were obliged to purchase these fabrics through *dalal* (brokers) specially appointed by the Government. The agents were paid a considerable sum annually for the privilege they enjoyed and in return they charged a percentage on all the sales made by them. The *gomasta* of the company who established private trade of their own also turned this immunity to private advantage. In return, their Indian brokers or commission agents also tried to run similar business. But they were debarred from sharing this advantage by their English counterparts, and had consequently to carry on trade under a severe handicap.

Baluchari

A variety of beige silk textile of Bengal manufactured in a village called Baluchar in the district of Murshidabad is known to have earned a very wide reputation for its delicate texture and design. The textile has been known as *baluchari* (*baluchar)* from the place name. The *baluchari* product is often called figured silk; because floral and animal figures have been used extensively on its body. As a work of art its value cannot be overestimated. This popular work of art, often treasured as family heirloom, remained hidden away in private possessions of Bengali women and was an article of fashion. Even today it symbolizes social distinction and elegance. The exquisitely designed *baluchari sari* are a tribute to the artistry of their craftsmen.

The raw material of the *baluchari* textile is silk, obtained from cocoon grown locally with great care in the mulberry plants (*Morus indica* Linn.). The mulberry silk is commonly known as *resham*. The silk industry of Bengal has had a glorious tradition for several hundred years. A continuity of the tradition can be traced in Bengal from as early as 1405 A.D. The historical accounts of medieval Bengal refer to Gauda as a famous centre of silk products. The Chinese traveller Manhuan (1405 A.D.) clearly mentioned in his book, *Manhuan's account of the kingdom of Bengala* that silk produced in Bengal and known by the name *chin sukh (chinangshuk)* was widely known as fabrics of great quality. In 1705 A.D., Murshidabad, previous name Mukhsudabad was re-selected and elevated to a capital city by Murshid Quli Khan in supersession of the previous capital in Dhaka. Murshid Quli Khan is reputed to having a deep love for art and industry. The royal patronage helped resuscitation of the moribund silk industry of Bengal.

The *baluchari* textiles are however not a monopoly of the village Baluchar alone. Similar textiles were produced in many other villages near about Murshidabad where silk weaving is known to have flourished and the production centres are Bahadurpur, Amaipara, Amdahar, Ajimgung, Begdahar, Baliapukur, Beligram, Ramdahar, Ramsagar, Mirzapur, Jangipur, Kandi, Khagra, Islampur Chak, and many others. Among these active centres of silk weaving Bahadurpur is the native place of Dubraj, the celebrated technician whose name has come down as the doyen of *baluchari* weaving. Besides these places *baluchari* textiles were produced on a lesser scale at Mahimpur, Beldanga, and some other places in Murshidabad district where coarse threads from pierced cocoon are used mainly for weaving *matka*. The *baluchari* products constitute the *baluchari butidar sari* mainly; yet there are other products too. These are ornamental *chaddar, dhoti, jor, matka*, short descriptions of these varieties are as follows :

Chaddar - This has floral decorations at the borders and corners mainly and occasionally all over the body. The body is of white colour or off-white, the ornaments are either white or ash coloured. The size is usually 9′ × 4.6′. This is known generally as *alwan* (wrapper).

Kora – Plain unbleached piece is known as *kora*. The length is usually 50 yards and 42 inches in width containing usually 1,000 warp threads.

Dhoti and jor - Pieces known as *chelir dhoti* and *jor* are usually made

plain and white. A pair of such textiles is worn by the bridegroom at the time of marriage. Such *dhoti* is also worn by rich Hindu widows. The length of a *dhoti* used to be 5 yards and of a *jor* 7 yards. Each type has the same width of 45 inches. *Dhonipar, katkapar, fitapar, ghumipara, churipar dhotis* are the important *dhotis.*

Matka - This is prepared from silk waste. These products are of coarse kinds, which supply the demands of the elderly men and common people for making shirts. *Matka* are available in long pieces, having a width of 40 to 45 inches.

Of all the varieties, the *baluchari sari* takes the premier position and draws the attention of all for its magnificent designs and motifs and all its resplendance. *Tajpar, kalkapar, padmapar, dhonarapar* are the most important *sari* of the Bengalis. A close study of the *baluchari butidar sari* reveals the following features.

The *baluchari sari* is usually 5 yards in length and about 42 inches in width. The end-piece (*anchala, pallav*) is usually 24 to 32 inches broad and happens to be most richly ornamented (Fig.3). The entire field of the *sari* minus the *anchala* is decorated with cone-shaped floral spray (*buta/buti*). A *buti* is a floral motif woven with exceptional grace and dexterity. Each of the *buti* in these textiles looks like jewels sparkling in the background. The *buti* are arranged either in vertical rows or in *tercha* (diagonal lines), with beautiful floral borders running along the edges of the *sari.* But *baluchari sari* of later date kept the ground plain. Best of the *sari* produced by the most celebrated master weaver Dubraj Das (the last known best weaver of *baluchari sari* who was born in 1899) are without any figure. Gostha Karmakar was also an expert weaver of *baluchari sari* for flowery decorations of later products. Narayan Manigram of the Mirzapur village is a master weaver of *baluchari sari.* Hemchandra Bhattacharjee was another master weaver who was especially known for silk *namabali,* and was a disciple of Dubraj Das. After the death of these masters *baluchari* products suffered a loss and died. After them there was no new artist of the tradition, and certainly no new patron to foster its rejuvenation to bring back to health providing sufficient vitality for its fresh and smooth flow. The *baluchari* weavers lavished most of their skills in decorating the end-piece, and the traditional *kalka* design is common and is found disposed in panels of rectangular shape. The panels usually enclose a row of five *kalka* within floral borders on all sides. The *kalka* is a widely popular traditional motif found in *nakshi-kantha,* wood carvings, terracottas, *ansattva chanc* (mango mould), etc. works of art of Bengal.

The *baluchari sari* are often found decorated with peacock designs, the bird being shown singly or in pairs. Other designs include *buti*, usually floral, either single or twin, figures of men and women smoking *hookah* (waterpipe), nobleman or lady holding a flower, nobleman or lady riding a horse, two ladies in conversation, royal grandee enclosed in rich architectural settings rich and so on. But the later varieties of *baluchari* textiles are frequently decorated with European motifs. The artistic value of these designs, in most cases, are quite high, being the works of skilled and experienced masters. It may be pointed out that with change of time and taste of society the designs also have undergone considerable change. The *baluchari sari* produced during the British rule began to show Europeans seated on cushions; hubble-bubbling *hookah* , hissing steam engines; double-decker steam launch with passengers, Europeans as well as Indians. Europeans dressed in trousers, hats and rifle with bayonet in hands; Europeans with wine cups in hand; hunting scene; etc. Those are only a few among many which evinced British influence on the textile art of Bengal. In one surprisingly excellent *sari* preserved in the collection of the Asutosh Museum of Indian Art, figures in coats, trousers and hats are shown standing in a *rath* (chariot). *Baluchari sari* portray human figures in a more refined way which testify that if an artist does not have clear knowledge in the articulated position of human limbs and parts, he cannot set up the *baluchari* in a decent manner. The subject matters of the designs of *baluchari sari* are unique and there is no denying that these designs emerged mainly from the traditional forms which have been handed down from one generation to another, even though there is something apparently non-traditional, being contemporary and objective, reflecting the newly arising life and work of the people. The designs and motifs of the *baluchari* textiles may facilitate a study on the socio-cultural taste and economic life of the weavers and the consumers of contemporary times.

For weaving the *baluchari* textiles both *naksha* looms (i.e., looms worked with harness cards) and ordinary looms (i.e., looms with heddles) are used. The *naksha* loom developed with special contrivances for producing the most intricate patterns in *baluchari* textiles are undoubtedly great achievements in the field of technology. For complicated designs as many as fourteen *naksha* were employed at one time. It is easy, therefore, to imagine how a piece of 5 yards long and 42 inches wide piece of textile could take six months for a weaver and a draw-boy to weave, beginning with adjusting the loom and ending in the completion of weaving a cloth. Generally 5, 10 and 20 pieces of textiles are woven at a

time before readjustment of the loom. The weaving technique of *baluchari* textiles is slow and laborious and demands a high degree of specialisation.

The body colours of the textiles are usually dark red, deep Prussian blue, purple, chocolate, green, yellow and the patterns are worked out in white, red, orange, yellow or green. *Baluchari sari* dyed with madder are considered to be specimens of earlier phase of production. It may also be noticed that madder dyed *sari* were usually decorated with the designs showing the falcon perching or architectural settings which rather point out that these were comparatively earlier specimens of *baluchari* textiles. In spite of their rich colour schemes and aesthetically beautiful motifs and designs the *baluchari* fabrics avoided strong colour contrast. Each pattern is traced in a colour which harmonised with the ground on which it is laid. Small speaks of different tints that are used to afford relief and the practice of designs in two shades of the same colour leads to a good deal of modulation of the colour tone. The pictures of men and women, which are built up on vertical and horizontal lines and are enclosed in inches as it were, while the rest of the ornamentation, which is floral, is based on traditional schemes and methods of decoration of textiles and is distinguished by a characteristic rhythmic and undulating flow and freedom of movement.

For a long time Murshidabad silk fabrics could hold their own market good; but once the machine-made silks took their place in the market, fate of the handloom silk industry was, so to speak, sealed. Cheaper varieties of imitation silk cloth, produced by power-loom captured the markets of the *baluchari* textiles. The increasing low price of imitation silk cloth, high price of pure silk and cotton textiles further tended to force Murshidabad silk products out of the market. The inland trade in Murshidabad silk is mainly dependent on the requirements of the Hindu ceremonials and in the *baluchari* silk products.

Revivalism

The question of revivalism is a matter of principle. The All India Handicrafts Board, the Khadi and Village Commission and Resham Silpa Bipani, the Art Industry, Design Centre, etc. steer weavers to imitate designs from old textile of India. It is presupposed that old textile designs repository is good and is of worth copying for the flourishing of a spirit of revivalism. Perfect weave, harmonic blending of colour,

balanced disposition of different colour threads, skilful finish and designs made the old textiles superior. Skilfulness was the quality to inspire the weavers only to copy design for revivalism of old textiles. It will set in motion springs of creative inspiration of old textile no doubt, by imitation; but will result in a hybrid and degenerated junk. Indeed, all imitation is the result of ignorance and lack of sensitiveness. Mere imitation of old textile designs grows no blossomed flower and it will be weeded out in time. The old textiles have much to give to us, but we must know what to look for and how much to take. A new spirit of genuine creation of new designs should be cultivated among the minds of weavers. It would be much better to produce new designs in their own ways and finish the weave skilfully. Design and colour will change as the fashion and style changes and as time changes, it is expected new designs will be welcomed by future generations. There are always delicate alterations in old and modern choices and fashions which are in tune with the spirit of each individual society. At Bishnupur, with Government enterprise, jacquard looms have been employed to loom *baluchari* varieties of *sari* imitating successfully the motifs and designs of the traditional varieties of *baluchari* silks. Now the Shyambati-Baidyapur Tantubay Samabay Samiti runs a training school for upgrading the silk weaving and *baluchari sari* are produced in the Udaynarayanpur, south Rampur, Irali, Gaja, Sultanpur, Khempur, Piyarpur, Sitapur, Baidyapur, Haripar, Dastipara, Svardanga, Kuksimla villages in Howrah. Attempts have also been made to revive the silk industry at Murshidabad district. The Government has taken some steps regarding the culture of silkworm there and a handful of co-operative societies has been organized for manufacturing the silk textiles at Murshidabad. The *baluchari sari* produced at Bishnupur on jacquard looms are definitely of inferior quality in colour, design and fineness.

Kasida

Kasida is an embroidered muslin product of Dhaka and this textile art was once a corollary to woven *jamdani*. The term *kasida* is a Persian word which connotes embroidery of floral design with needle and thread. As early as 1851 James Taylor in his book *'A Descriptive and Historical Account of the Cotton Manufactures of Dacca'* describes that pieces of cloth were embroidered in the cotton portion of the warp with the needle and these are called *kasida*. Dr. A. K. Coomaraswamy said, fine darn and satin stitch work is done in gold and wheat coloured silk on muslim[29]. But the latter varieties are embroidered in chain stitch. Waist-

belts, scarves, handkerchiefs and turbans are prepared in the *kasida* technique. A special type of *rumal* (handkerchief) is prepared with heavy silk embroidery on plain cloth. The embroidery is done with untwisted *muga* thread. These *rumal* are exported in large quantities to the Middle East, especially to centres of Muslim pilgrimage. Even the Bengali pilgrims to Mecca used to buy at a higher price *kasida* handkerchief without knowing that these were the products of Bengal. *Kasida* textiles are exported by Arab merchants to Persia, Egypt, Turkey where they are chiefly used as *pagri* (turban). It is also exported to Tunis, Morocco and Malta. This excellent art object fell into decay since the wide introduction of fez (fur) caps. The finer grades of *muslin* lend themselves suitably to *kasida* products.

This textile embroidery is largely done in Ambagan, Santinagar, Sakharipara, Kalianibas, Johar Colony, Talikhola, Bangur, Barasat - all in the districts of North 24 Parganas and Nadia in West Bengal. The *tana* (warp) accommodates 1,520 and 1,482 rows of thread within a width of 40" and 39" respectively. The length of the *tana* is 180 yards or 420 yards long, so that 30 or 70 pieces of *pagri* each 2 yards long are made from one prepared *tana*. *Kasida pagri* is made in three different widths of 20", 13" and 10" for the aged, middle aged and young respectively. Weaving of *kasida* cloth is done on horizontal loom. But weavers reported that *kasida* cloth weaved on pit loom (fly shuttle) is better and finer in texture.

Kasida folk embroidery is considered essentially a feminine art of Bengal. At present there are mainly two types of *kasida* production, viz. *pagri* and *rumal*, each having different forms of design.

Pagri - The designs are :

1. Circle - Diameter is being 1/2 inch. The circles are stamped upon the cloth by pressing the open end of a fountain pen cap daubed in delible ink. This design is locally known as *bobby buti*.

2. *Pata* (*Leaf*) *buti* - This is leaf like in outline. One leaf is arranged diagonally in each square. Four such leaves are found disposed in four adjacent squares and it looks like a blossomed flower. This type of design is known also as *jhumka phul* (flower).

Another form of leaf pattern is that small leaves are arranged in a single file; but the leaf in each square is placed alternate to each other. This arrangement ultimately forms a flowing line on the ground of the cloth.

Each *pagri* has two *anchala*. *Kasida pagri* contains 19, 12 and 9 rows of *buti* on its ground and accordingly these are known as 19, 12 and 9 *buti pagri respectively* for the three age-groups as mentioned. The *kasida* embroiders lavished most of their skills in decorating the body and end-piece with traditional designs, embroidered in running stitch with *muga* thread. Before starting embroidery the *muga* thread is boiled in water with a pinch of soda and salt and as a result the golden colour of the *muga* thread attains a lighter shade and each fibre separates adherence from each other and freely remains loose which when embroidered spreads evenly and covers entirely the design heavily.

Pagri is used as a headgear. The long length of the *pagri* lends it free to wrap over head a number of times so as to protect the head from the scorching rays of the sun in the torrid zones.

Kasida rumal is square in shape, 36" each way with wide borders on all sides. A four petalled big sized flower is embroidered at the centre while the corners are covered with *kalka* motif. The central flower is full blossomed with outstretching petals which look like a *padma* (lotus). But the squares disposed in the ground are filled up with trifoliate leaf patterns. Though handkerchief by name it is used as a necktie.

The embroiderer used to sit in a cross-legged fashion. The cloth on which embroidery is to be done is spread over upon her thighs and stretched by inserting a portion of the cloth between the knee folds. The worker pushes the needle never towards her body. She holds a portion of the cloth usually by her left hand. For continuing the embroidery work in sitting position and attentive look they suffer from rheumatic pain in the waist and eye trouble.

The art of embroidery probably originated among the peasant class. The peasants are largely engaged in agricultural operations for a few months in a year. They utilize their spare months for other pursuits that offer them some income and embroidery is one such pursuit. Though domestic in character, this activity has a distinctive feature in the art tradition of Bengal. The art of embroidery has lived and has been handed down from generation to generation. Embroidery is not merely a work of needle and thread, but an art of aesthetic appreciation. The embroidery is not in need of patterns. They invent their own patterns from sources of nature and domestic objects and give expression to their innate aesthetic urge through the designs thus formulated by them.

In the range of all embroidery products the *kasida* of Bengal as had been earned an abiding reputation for the refinement of the threads used and the designs of the embroidered decoration which embellished the body of the textile.

Namabali

In Bengal the traditional block-printed textile is the *namabali*. Cotton mostly and inferior silk cloths are used for printing *namabali*. A *namabali* usually has the religious text inscribed either in Bengali or Devanagri (Sanskrit) scripts on one surface only. The words are printed by a rectangular block with floral borders or with bold straight lines all around the blocks (Fig. 4). It may be mentioned that these words bordered with floral designs were once woven in silk *namabali* produced at Murshidabad. One such specimen is preserved in the collection of the Asutosh Museum of Indian Art, University of Calcutta. The art of printing silk *namabali*, handkerchiefs and scarfs is practised at Khagra in Murshidabad. Nabadwip in Nadia district is a centre of printing cotton *namabali* in large quantities right from the time of great Vaishnava Sri Chaitanaya Mahaprabhu. The followers of Sri Chaitanya, priests and devotees wore *namabali* as *uttariya* around the upper part of the body during worship, *sankirttana* and ritual performances. The handkerchiefs are of 20" square and are used to cover small tables and as neckties.

In Bengal textile printing is traditionally done by hand-blocks with indigenous colours. At present Bengal printers use ready-made synthetic azo-dyes and they follow almost the same traditional printing process. Early patterns on textiles were printed with vegetable fugitive colours. So, the pigments remain upon the surface of the cloth as the viscosity of the colouring fluid does not allow the pigments to permeate the cloth. Nowadays the colours used are fast and are yellow and orange.

Colour blocks are made of hard and close grained well seasoned tamarind wood. Sharp chisel and pointed knives are sufficient enough for denting fine lines, scripts and designs in the blocks and for trimming the edges. The block varies in size, according to the pattern. It is commonly about 9 or 10 inches long and 5 or 6 inches broad with a grip at the back. The designed face of the block is smeared with colour solution and stamped upon the cloth. Often a light wooden mallet strikes at the back of the block at the time of printing operation. But for a distinct print the printer strikes gently with his fist upon the block. Printing

works take place over a wooden table, locally called *chowki* with four massive legs to prevent tilting. Usually such a contraption measures 1′ high, 1 yard long and $1\frac{1}{2}$" broad. Such a table is suitable for printing in sitting position and the traditional printing is done in sitting posture. The table is covered with a blanket which in turn is covered with a piece of cloth folded twice or four times or otherwise as necessary. It acts as an inking pad, ready for operation. The printed cloth is dipped in a solution of salt to precipitate the mordant in the form of an insoluble salt, whereby both the alizarine colour and mordant are fixed on the cloth and this enhances its brillance. It also cleans the ground of the cloth to become more white.

Hand-block printing is carried out especially in urban and semi-urban areas. At present the most highly skilled printers are those of Calcutta and Chandrakona in Midnapur district. The main features of present day printed *sari* are application of many colours with a wide varieties of designs comprising of zoomorphic, anthropomorphic, floral and geometric forms with borders of different shades using chemical dye-stuff and mordants which produce a more lasting effect. The colour becomes a part of the fabric and is fast enough to withstand the effects of washing. Hand-block printing is a simple and slow process and is done manually. But its workmanship is fine and has a pleasing appeal.

Socio-economic condition of the weavers and embroiderers

The social and economic condition of the weavers and embroiderers of Bengal is deplorable. Weaving is a family enterprise in a sense that each family member has to lend his or her hands in the process of manufacture. The women spin the yarn and prepare the warp, the children fill the bobbins while the males are engaged in the final act of weaving. Thus all the members of a family work together for a common purpose and it thus forms a family occupation. The ranking of weaving occupational groups as high or low depends upon whether the industry represented by the weavers is in an advanced or backward stage. Weaving is an occupation of a group of people commonly known as the *Tantubaya* (weavers) and this family occupation especially allotted to them is pursued by some communities forming distinctive castes. But this caste-based occupation is not pursued as rigidly nowadays, sometimes members from other higher castes are also known to have taken up the profession of weaving for their livelihood in cases of exigency. But such

cases even today are not a common occurrence. The communities responsible for weaving such as the Jugis, Tantis and Basaks are relegated to an inferior social position. Practically the weavers are looked down upon even by those belonging to the same caste, but engaged in other occupations.

The Jugi weavers are considered low in the social scale. They are regarded as being of impure caste as they prepare starch by boiling rice and therefore, their touch contributes to pollution. Originally the Jugi were weavers of coarser kind of fabrics. The women of the Jugi community also know the weaving and they do it during their leisure hours. But the Tanti and Basak communities are skilled weavers and the finer qualities of cloth are generally manufactured by them. For their skill in weaving they have some voice and command in society. The Tantis of Bengal are Sudras of the *Nabasakha*. They are regarded as belonging to the clean castes and as such they are not considered as degraded and their men and women are eligible for domestic service in the houses of the Brahmins. Indicating the social position of the Tantis, N. N. Banerjee says," ... the Tantis in Bengal themselves form a separate caste, being one of the nine pure castes or *Nabasakhas* ...., whose social position is only next to the Kayasthas. A Brahmin can drink water drawn by a person of the Tanti caste without being polluted and it is no social degradation to act as a priest in a Tanti house"[30]. A good weaver irrespective of any social caste has command and respect for the skill and perfection required by him. Embroidery is a leisure time work of poor women of all classes. Generally old women are engaged in embroidery. This work is not considered low. It is a work of art primarily and the best embroiderer has honour, irrespective of caste. Likewise, printing a *namabali* is not considered low because the *namabali* bear relationship to religious rites. For that reason, persons engaged in printing *namabali* are not looked down upon.

Next to agriculture, textile weaving appears to have been a widely practised economic pursuit in Bengal. The craft of weaving has been one of the pivotal occupations in the economic structure of the society. As most of the members of a family are engaged in different operations of this profession, the out-turn is generally quite considerable. Weaving again, is not the sole means of livelihood in case of most of the weavers, many of them also have lands which they cultivate. Thus weavers have double economic dependence. To them, weaving is the primary source

of income while agriculture is the secondary source. Weaving of fine cloth makes considerably higher income. But the handloom products have been hard hit by the industrial products introduced in the market in large quantities and as a result the economic condition of the weavers is not good. They fall prey in the hands of the *mahajan* (middlemen) for the supply of raw materials and economic support. They advance the yarn and the weavers, in return have to supply them the cloth they weaved. They are meagrely paid for their labour. It is obvious that the middlemen take the lion share of profit while the weavers have to struggle hard for their livelihood. Actually the businessmen, agents and middlemen are the profit makers. They live on the toils of weavers and embroiderers. The weavers and embroiderers pay with maximum labour in return get the minimum of earnings, yet they continue the work for their poor economic condition and add some extra income to the family as relief.

The art of weaving has been a significant achievement in the history of textiles of Bengal. Bengal has been famous for cotton and silk weaving from a very early time and still she retains the age-old tradition and practices. Many of these varieties of traditional textiles of Bengal are appreciated not only for their superb craftsmanship but also for their importance in the history of the evolution of weaving technique, motifs, designs and colour combination. The bewitching colour scheme in the Bengal textiles cannot but evoke a profound admiration of the people by the sheer brilliance of their colour, the effects of complicated and subtle designs, perfect finish and the balance and flowing rhythm of the composition. The conventional motifs and designs, like *kalka*, etc. have changed with the change of time and taste of the consumers. Designs are thus the pivot on which the fashion and style revolve. The entire range of decorative motifs employed in designing the textiles of Bengal gives it a proud position in the field of textile industry of India. The designs of the textiles of Bengal are the reflections of the inner sensibilities of the people with their phases of development as revealed in textile art. These textile designs bear indication of the socio-cultural life of the people of Bengal. Bengal textiles present a wide kaleidoscope of colour and beauty. This is naturally reflected in her costumes. The diversity and variety of life styles find expression in the textiles of this vast land, manifesting a tradition of grace and dignity. The variety of textiles presents a panorama of designs and colours, with many different shades and their tonal balance giving them a universal appeal.

The textiles of Bengal do not stand isolated in the prevalent social arena. Weavers and embroiderers begin to eke out their livelihood by practising the arduous job. As a sequel some techniques have faded out, some are on the wane while others are confined to particular areas.

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Fig. 1. Terracotta female figurine showing diaphanous drapery and folds of cloth are seen over left arm, Tamluk, Indian Institute, Oxford.

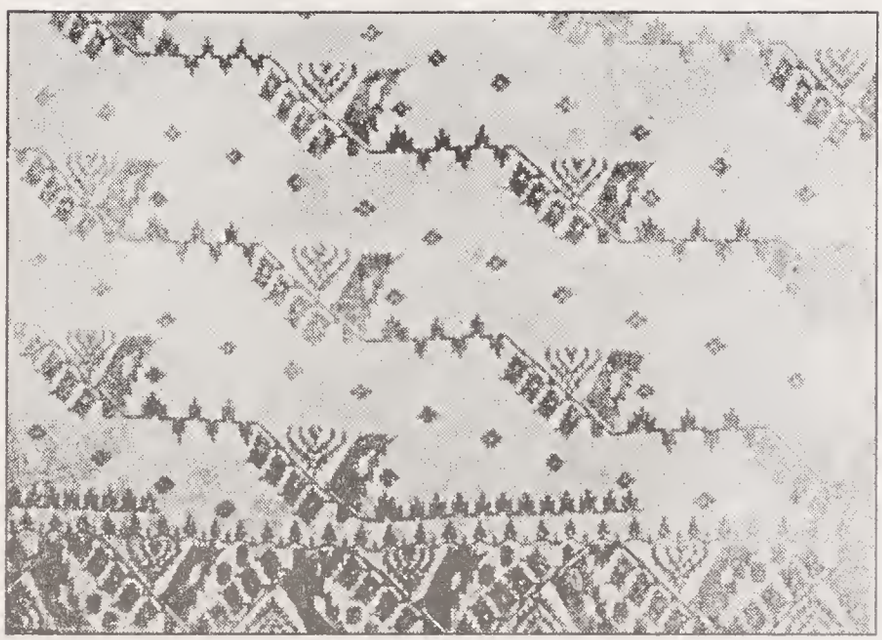

Fig. 2. Part of a *jamdani sari*, Dhaka.

Fig. 3. *Anchala of a baluchari butidar sari* with royal grandee in an architectural setting and decorative *kalkas* at middle, Design Centre, Calcutta.

Fig. 4. Woven silk *namabali,* Asutosh Museum of Indian Art, Calcutta University.

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Calenderical systems of the Nicobars

Lotika Varadarajan

Unlike the Onges and the Great Andamanese, the Negrito hunter gatherer communities of the Andamans, the Mongoloid Nicobarese tribal groups were more advanced, practising horticulture in jungle clearings, domesticating pigs and fishing with the harpoon rather than the bow and arrow. Habitations existed along the sea-shore and there was great sensitivity to the harvest provided from tidal movements of the sea. It is probable that the inspiration for this came from Chowra. This led to the development of a lunar tidal calendar which, with variations, was observed by all Nicobarese tribal groups. This calendar not only dealt with the twenty-four hourly tidal movements but also covered aspects such as spring and neap-tide. It is significant that all currents in relation to the Andaman and Nicobar islands have their origin in tidal movements. Tidal directions are east to west at high tide and west to east at low tide. Phases of the moon such as half moon, full moon and *amavasya* are directly connected with the strength of the tide. *Amavasya* and *purnima* were marked by the highest water mark at high tide and the lowest mark at low tide. The current would be strong at this time and the term used for this is spring tide. Each half moon period is marked by the neap-tide when high tide reaches its lowest point and there is only a small difference in terms of flow between high and low tide (oral communication, C. T. Mehmood, Master, M. V. Moti, Andamans).

The lunar calendar was used for fishing, setting dates of seasonal festivals and for inter-island sailing. The Nicobarese outrigger, in its variant forms, was better suited to run on the sea than the Onge outrigger. The pattern of inter-island sailings was based on two factors : seasonal winds and items of trade which circulated between individual islands. The period of the north-east monsoon was preferred for long distance sailing.

The islands of Car Nicobar, Chowra and Nancowry constituted the three focii for commodity exchange. Apart from connections between tidal waters and fishing, calendrical systems had also to deal with wind systems. Changes in the wind system were important for long distance sailing. In relation to fishing if the sea was rough on the west coast, it could be expected to be calmer on the east coast. Apart from the tidal chart, there was a wind compass but the latter was not expressly formulated. Calendrical systems encapsulated several modules dealing with specific activities enshrined within a life style the rythm of which was moulded by nature.

Calendrical system of Chowra

The island of Chowra was accorded the highest position among the Nicobarese because of the power which accrued from knowledge expressed through magic. The Chowra calendrical system was never made explicit in written form nor was it bestowed with any name. Indeed, in traditional knowledge systems based as they are on a continuous mode of implicit cross referencing, codification can be self defeating. This preference for an oral mode can be taken as an indication of the sophisticated thought processes of the Chowraites.

Phases of the moon

The day before *amavasya* was called *engngö hing*. On this day a small moon was visible in the east. The term for *amavasya* was *iliuö si*. The first sickle moon in its waxing phase after *amavasya*, visible after about 3 days above the water in the west, was called *kanat*. The water would be still for two days and this was a good period for fishing. Counting started from day 4 after *amavasya*, this day being called *hiong*. Between day 2 and day 6 the current would increase. The next unit, day 1 to day 6, was called *samioplo saneuiyö öngliöng*.

Days 7,8,9 were collectively called *manuchö öngliöng*. The sea would now be calm and there would be no current. It was a favourable period for fishing but not for sailing. Day 8 was called *ranön*. Day 9, the first day of the full moon, was called *raneh han solhö*; day, 10, the second day of the full moon was called *annöyö hansolhö*. Days 10 and 11, when the moon entered into its waning phase, were called *hanniöng si kën* and *anne si kën* respectively, while days 13 and 14 were known as *hanniöng si hanyal* and *senanne si hangal*. Between days 10 to 14, the current would

Chart I : Kinrööto Chingëant : (The Calendar of Car Nicobar)

AYÖÖ	4	o ●
OTCNINCNOTO	3	o ●
	2	o ●
SALNUVÖ	1	o ●
CHAMÖOK NGÖ		
KRAN NGÖ	10	o ●
	9	o ●
	8	o ●
	7	o ●
	6	o ●
	5	o ●
	4	o ●
	3	o ●
	2	o ●
	1	o ●
ANÖCHÖ	6	o O
CHAUKYE	5	o O
KUMTOP	4	o O
SOHO	3	o O
AN PANO	2	o O
FANANG EL KUI	1	o O
CHAMÖÖK	10	o O
	9	o O
	8	o O
RÖNG CHÖÖK (OTHEM)	7	o O
	6	o O
	5	o O
	4	o O
	3	o O
	2	o O
	1	o O

MONTH

1. January	-	031
2. February	-	028-029
3. March	-	031
4. April	-	030
5. May	-	031
6. June	-	030
7. July	-	031
8. August	-	031
9. September	-	030
10. October	-	031
11. November	-	030
12. December	-	031

WEEK

Sunday	-	O
Monday	-	O
Tuesday	-	O
Wednesday	-	O
Thursday	-	O
Friday	-	O
Saturday	-	O

DATE

1	O	11	O	21	O	31	O
2	O	12	O	22	O		
3	O	13	O	23	O		
4	O	14	O	24	O		
5	O	15	O	25	O		
6	O	16	O	26	O		
7	O	17	O	27	O		
8	O	18	O	28	O		
9	O	19	O	29	O		
10	O	20	O	30	O		

increase, the unit being called *saneuiyö öngliöng àlhinöt*. However, on day 14 the current would begin to decrease in strength. On days 15 and 16 there would be no current. This was associated with the half moon called *àlhinot*. Days 16 and 17 were called *manuchö öngliöng*, day 17 being marked by the beginnings of a resurgent current. After day 18, the current would progressively strengthen as was noticeable in the earlier cycle from *iliuo si* to day 6 in the period of the waxing moon.

The term *panlecho* covered a period of high tide with the current flowing east to west. This easterly current was called *lou panlechö*. *Kantuko* denoted a period when there was a strong current flowing west to east. This westerly current was called *lou kantukö*. (Informants : Father Sylvanus, Hillary, Leslie; Chowra).

Kinröötо Chingëant - The calendar of Car Nicobar (Chart 1.)

The word, *kinröötо*, has more than one meaning. In the absence of a written tradition, often a mark to recall a particular event would be made on wood. The mark was called *kinröötо* and the event was called *karod*. This association between an event marked and its recall could explain why the term *kinröötо* began to be used for the Car Nicobarese lunar calendar etched on a wooden board. The *kinröötо chingeant* is used for many activities in Car Nicobar. There is a cycle of seasonal festivals the dates of which are determind by phases of the moon and movement of the tides. The transition of fishing from the east to the west coast of the island follows a similar pattern. Even days for extraction of oil from the coconut are based on *kinröötо* dates.

Prior to the development of the wooden peg calendar, there was an oral method, counting being initiated with the sighting of the new moon each lunar month. The lunar month is divided into two segments of 15 days, each unit of the waxing and waning moon being called *heng tak* (See Chart 1). The first phase extended from 1 *Sānalö* to *Chaūökye* and the second from *Anöchö to Ayöö*. During this, the moon rises west on day 1 *Sānalö*, moving west to east, the eastern most point being reached in *Chūökye*. For months having a lesser number of lunar days, adjustments are made within the last two days of the second cycle and day one will start in conformity with the phase of the moon. Different phases are marked by specific names.

According to Herbert, (Chuckchucha village), 1 *Sanūlö*, is marked by

the new moon and there would be high tide at 5–45 pm. accompanied by a strong current. The tide and current would decrease in strength between days 5 and 6. On day 6 preparations would be made to go out sea on day 7, *Röng chöök*, when there would be no current.

On day 8 there would be a slight current. Day 10, *Chamöök ngö*, would mark the last phase of the moon starting from 1 *Sanālö*. Prospects for fishing on this day would not be too favourable.

Day 10, *Fanang el kui*, is taken as day 1 in the new cycle which marks the beginning of the next phase of the waxing moon. The current becomes stronger and fish may be found at greater depths. Day 3, *Soho*, marks the transition towards full moon when conditions would not be favourable for distant fishing. Day 4, *Kumtōp*, when the moon is almost at its peak, is a day of high seas. Day 5 is *Chīīökye*, when the full moon rises late and is visible in the eastern direction. This is also a day for avoiding distant fishing. By day 4, the tide occurs at 5–30 pm.

There was also a seasonal calendar in pre-Christian times. Peterson Job, Chuckchucha, describes this as

Sikeh ngö	no rain, wind direction from the east, light wind.
Sung	rain, wind from the west.
Ihuöi	rains cease, wind changes in direction and begins to flow from the east.
Chu-hot	wind from the east.

In this cycle *Sung* and *Chu-hot* are associated with a wind system.

With the acceptance of Christianity, the Gregorian calendar had to be integrated with the occupational calendar although, as noted by G. Whitehead[1], even *circa* 1925, there were no Car Nicobarese terms for days of the week or months of the year. The system of concordance between the lunar sequence and the Gregorian calendar was effected by the late Pukafënö Ignatius of Small Lapathy. This information was systematised and transferred on a board accompanied by pegs by the son of Pukafeno Ignatius, Obed Ignatius of Small Lapathy. This board was copied by others and spread with some variations. The *Kinröötö* board was provided with a system of pegs to indicate the phase of the moon, three additional tables were also incorporated. The table of months provided the name and sequence of the months. Next came the table of

the seven days of the week. The last table provided the days of the month in serial order running from one to thirty- one. On any given day there would be the following concordance between the pegs :

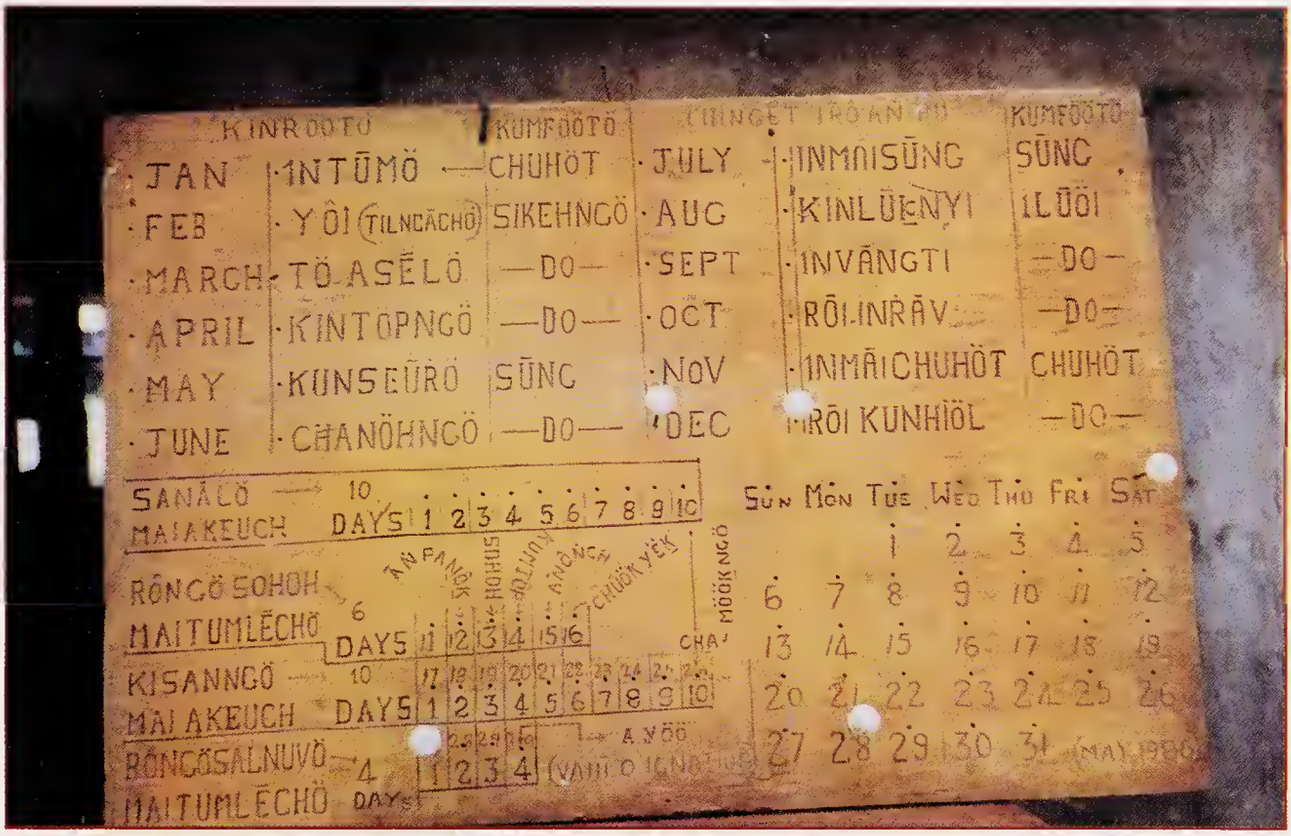
i) the lunar sequence
ii) the Gregorian month
iii) the day of the week
iv) the date of month

In the *Kinröötö* prepared by Obed Ignatius, Small Lapathy, the local twelve months corresponding to the twelve months of the Gregorian calendar were mainly named after the major Car Nicobarese seasonal festivals celebrated during that month. Thus

Gregorian	Car Nicobarese
January	*Intumö*
February	*Yöi or Tilngächo*
March	*Tö-aselö*
April	*Kintöpngö*
May	*Kūnseurö*
June	*Chanölngö*
July	*Inmaisūng*
August	*Kinluknyi*
September	*Invangti*
October	*Roi-inrāv*
November	*Inmaichuhöt*
December	*Roi kunhiöl*

This calendar was also synchronised with the seasons, each season having its associated cycle of activities. The reading given by Didicus Joh, Chuckchuka was :

Sikeh ngö, February to April, light wind from an easterly direction either from the south or the north. These winds had no name. The ossiary feast could take place during these months.



Peg Calendar framed by Obed, Small Lapathy, Car Nicobar

Sung, May to July, rainy season, the jungle was cleaned and seeds of the coconut, yam, and papaya were planted. The prevailing wind was from the west. This period was not favourable for distant fishing.

Iliöi, August to October, was a continuation of *Sung*. There was light rain, simultaneous sun and rain, rainbows. The wind, variable and strong, blew at times from the north, south and sometimes from the west.

Chu-höt, November to January, the wind was from the east bringing rain. It was the time for harvesting of yam, potato and sweet potato, *ku-chö-òn*.

The period from February to April was very favourable for fishing. There would be participation in distant fishing: During the months of February and March a round sailing trip to Chowra could be organised. Such sailings were called *kichut*.

Fishing would shift from the eastern to the western side of the island according to shifts in the wind system.

Calendrical system of Nancowry[2]

Lunar Calendar
(Informant : Isaac Akiaw, Champin)

The term *chaniela* is bestowed to the first moon visible to the eye after *amavasya*. On day 4 or 5 it assumes a shape comparable to the tusk of a pig and is called *kanial*. Half moon is called *hoilah*.

The period when there is no moonlight, as during *amavasya*, is called *chulngo*. Moonlight is called *pah*. The full moon is called *ungyuong*, its point of culmination being referred to as *ranak nyi kahe* (reach a point of bursting). The periods of half and full moon are not favourable for fishing. When the full moon rises after sunset in the east and sets at dawn in the west, the phase is called *huk ngoo ka* or *chilua*, egg shaped. The terms *chanuh ngo lah* and *hinnengalah* refer to phases in the waning period of the moon. *Mut* and *ma nut* refer to the last phase of the moon as also to *amavasya*.

The terms *chaniela* and *hinnengalah* can also refer to the duration of the waxing and waning phases of the moon.

The Wind System and Calendar of Activities (Informant : Cleopas of Hitui, collected and translated by Mark Paul, Champin). The Gregorian months, listed below, are to be taken as mean approximations.

Ranch Kapa	April	Changeable wind from the east or the west
Chëuch	May (first fortnight)	Called *ngam*, a period of no wind, calm sea, propulsion of canoe by paddle.
Sëh	May (second fortnight)	Start of westerly wind — last period of sailing/paddling to destinations such as Kondul.
Kafong	June	First sign of strong west wind. Rains. Time for planting of seeds.
Chani	July	Month in which *Hileuo* and *Iloi* (a creeper bearing white blossoms) break into flower.
Ranch Puah	August and	
Manango Puah	September	Both periods of mean spring tide during which all debris is cleared from the shore.
Lanëh	October	All fruit bearing trees approach end of fruit bearing, food becomes scarce while the wind becomes variable.
Kā katok	November	Food becomes extremely scarce. Towards the close of this month the wind begins to veer towards the east and fishing becomes difficult. (It needs to be remembered that the perspective is that from Hitui village).
Tuich	December	Period of even greater hunger — wind becomes more variable. Both during the month of *Kā Katok* and *Tuich*, the changing winds can cause occasional whirlpools. Whirlwinds are called *lamhuksuka*.
Ramòng	January	The east wind is well set but not too strong.
Mitus	February	Harvesting of garden produce such as tubers which marks the end of the period of food scarcity. Beginning of fishing with line and hook.
Mukhaek	March	Neither wind nor rain.

During the period *Mukhaek* to *Sëh*, approximately March to May, residents of the Trinket island go to the uninhabited Tilangchong island to make copra. This is also the period of sailings to and from Kondol. During the month of *Mitus*, gardening plots in the jungle are cleared and

The following wind system was sketched by Akiaw of Champin, Nancowry, the orientation resulting from the geographical location of Champin

Chart 2 : Calendrical system of Champin
Information : Isaac Akiaw

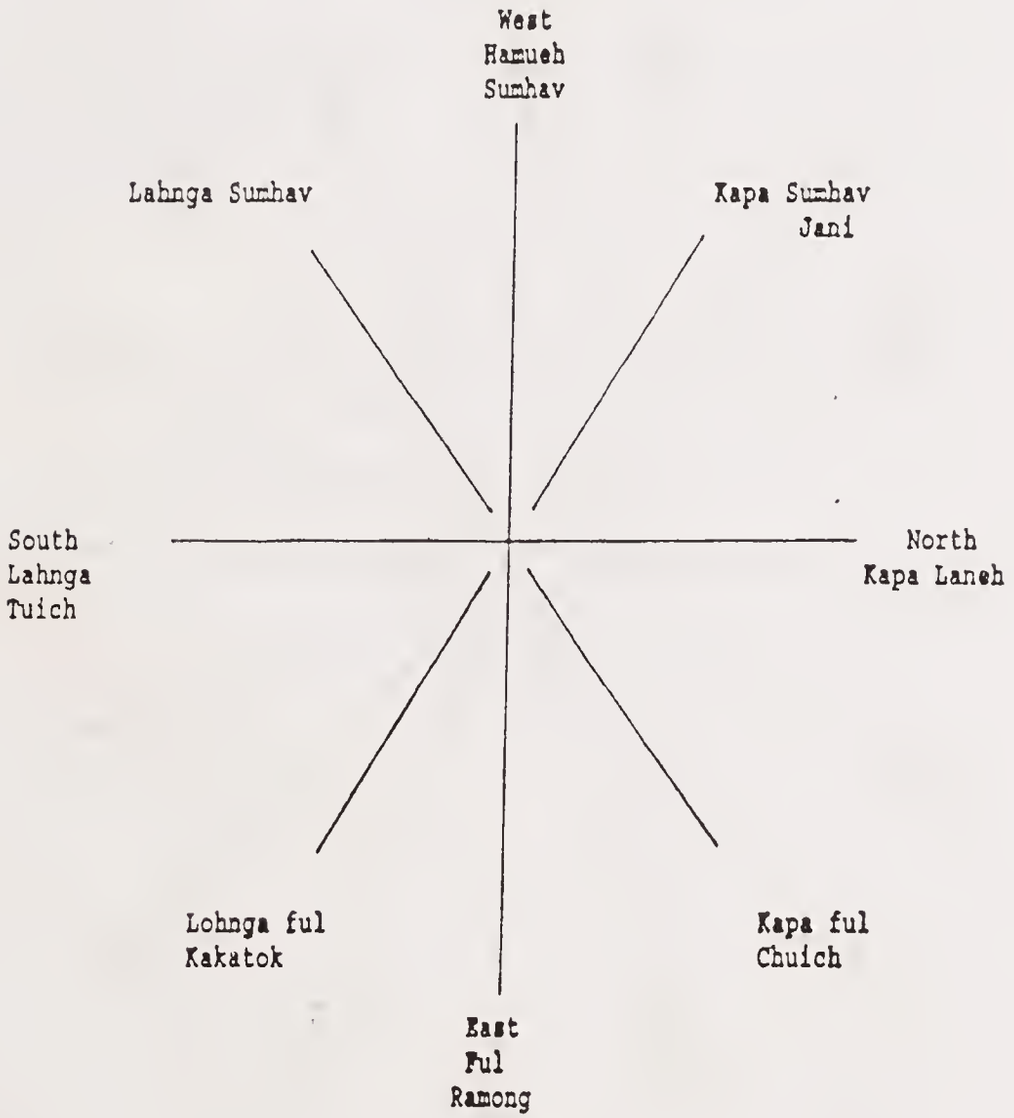
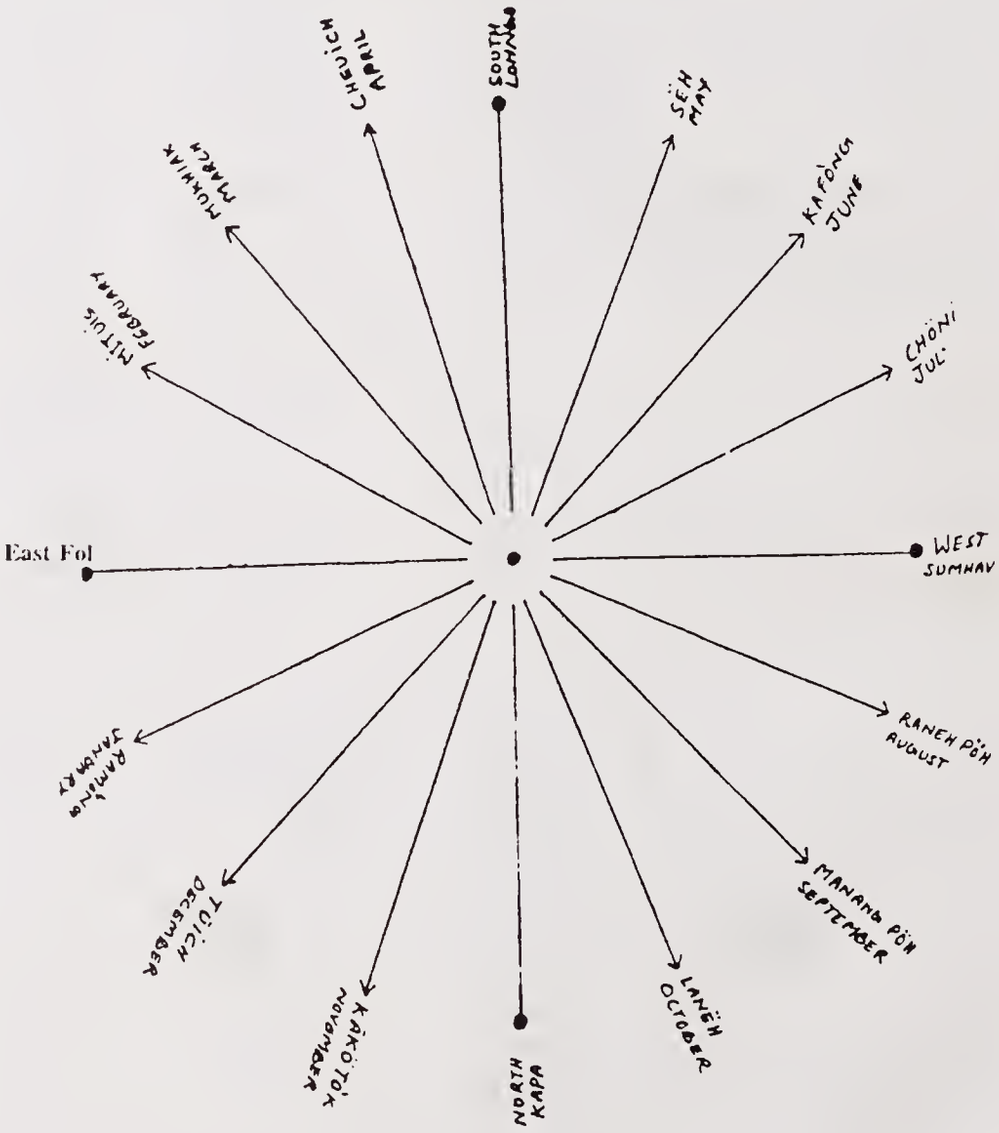


Chart 3 : Calendar Chart Based on Communication of Miluana, Inraiyo, East Bay, Katchal



the soil is made ready for planting. All the vegetation cleared is made into heaps which are then set on fire in *Cheuch* or *Sëh*.

The preceding wind system (chart 2) was sketched by Akiaw of Champin, Nancowry, the orientation resulting from the geographical location of Champin.

As had been accomplished in Car Nicobar, an attempt was made to coordinate the seasonal and wind system with the Gregorian calendar. Inraiyo aged about 85, a highly respected *miluana*, shaman, of Kuilathapain, north-west Katchal, provided verbal information which was then set out in the form of compass points by Daniel Amos, 2nd Captain, East Bay, Katchal. See chart 3.

From the perspective of this village, *Tuich* and *Ramong* were associated with strong wind. During *Ramong*, food was offered to the sea, *hangkok ramaleh*, so that the water would become calm.

The calendrical system of Bangali, Teressa.

(Informants : Hiram Jethro of Bangali village and Anthonai of Khalassi Village).

The lunar month comprises 29 days and was counted as follows

Day		
0	No moon, *amavasya*	*Achungo*
1	sighting of the first moon	*yanianla*
2		*aishe*
3		*ioch sihe*
4		*fen*
5		*tanishe*
6		*tanfue sihe*
7		*iset sihe*
8		*Infuon sihe*
9		*ioi hata*
10		*atok*
11		*hinpima*
12		*iaroun*
13	1st day of full moon	*hinlana*

14	2nd day of full moon	*hinteuhse hinlana*
15	1st day of waning phase of moon	*manangna hinlana*
16		*imeu*
17		*ana imeu*
18		*hiniya*
19		*ana hiniya*
20		*uk hiniya*
21		*chanuhnga*
22		*anaya chamuhnga*
23-29	this unit was called	*tafua tiam*

In this table the terms *fen*(4), *ioi hata*(10) were simple numerical equivalents. The other terms referred to phases of the moon. The terms used for half and full moon were *hiangla* and *let ko* respectively. According to Hiram Jethro, the shape of the moon changed substantially every 8 days.

From day 8 to 12 of the moon in its waxing phase the sea was still. From day 19 to the end of the cycle, the number of days being variable, the moon was in its waning phase. On the day of the sighting of the new moon high tide occurred at 6 pm.

Wind systems defined two seasons, the season of the west wind, *Has Sumhav* and the season of the east wind, *Has Acu*. Each unit was collectively known as *tafua kayay*. The seasonal calendar ran as follows :

Kiniose was associated with the months of May, June and July. This was the time of the rains and the season for planting. In May, the pig festival, *panu hanot* could be celebrated.

Oilui, August, September, and October was the time when tobacco or *taun* would be planted. *Kisan ngo* would be celebrated in the month of August.

Laneh, November to January. Only light work would be undertaken during this period.

There was neither a particular nomenclature for the period February to March, nor was any specific activity assigned to these months.

The entire gamut of the Nicobarese knowledge system is well

reflected in their calendrical system. Having a virtually symbiotic relationship with the environment, time was not of essence. The concept of linear time defined in eras had as little bearing as that of fixed cardinal directions. Each calendrical variant was finely tuned to specific geographical locations necessarily involving lack of uniformity. Given this background, the ability to integrate the Gregorian calendar within an elastic lunar scale bespeaks highly of the innate ingenuity and creativity of these island people.

NOTES

1. Rev. G. Whitehead, *Dictionary of the Car Nicobarese Language*, American Baptist Press, Rangoon, 1925, ii.
2. Whereas it has been possible to use diacritical marks for words drawn from the vocabulary of Chowra and Car Nicobar, it has not been possible to do the same for words drawn from the other islands of the Nicobarese group.
3. It is to be noted that synchronisation with Gregorian months differs from one locale to another.

APPENDIX

Some representative crafts of India

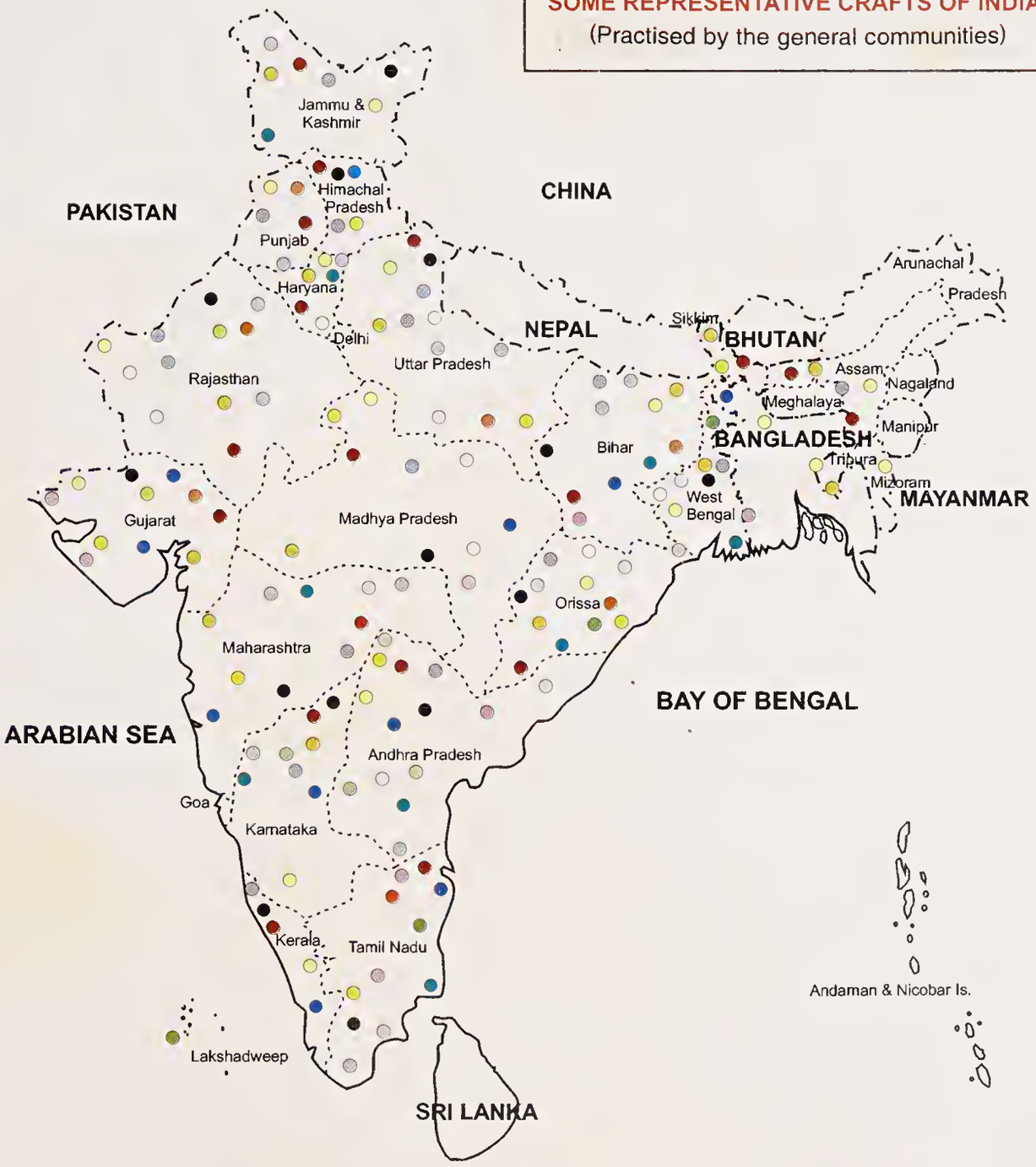
Name of State/ Union Territory	Different crafts practised by		
	General Communities	Scheduled Castes	Scheduled Tribes
Andaman & Nicobar Islands	–	–	Pottery, Basketry & Wood Carving
Andhra Pradesh	Weaving, Basketry, Wood carving, Stone carving, Lock & key making, Net weaving, Saddle making, Copper & brass vessel making, Knife making, Sword making, Pottery, Palm leaf product making, Gold-smithy Bell- metal work,	Basketry, Weaving, Leather work, Mat weaving	Basketry, Blacksmithy
Arunachal Pradesh	–	–	Snow shoe making, Musical instrument making, Basketry, Pottery, Wood carving, Weaving, Woollen blanket making
Assam	Weaving, Basketry, Blacksmithy, Pottery	Basketry, Gold- & silver -smithy, Pottery, Net weaving	–
Bihar	Rope making, Embroidery, Blacksmithy, Lacquer work, Wood carving, Basketry, Weaving, Copper work, Blanket making Stone carving, Pottery, Gold -smithy	Wood carving, Pottery, Weaving	Blacksmithy, Wood carving, Weaving, Basketry, Musical instrument making

Daman & Diu	Coir	–	–
Gujarat	Leather work, Basketry Wood carving, Gold -smithy, Blanket making, Weaving, Comb making, Brass metal work, Lacquer work, Gold– & silver-smithy Blacksmithy	Weaving, Basketry, Wood carving, Knife and scissors making	Basketry
Haryana	Basketry, Blacksmithy, Weaving, Bangle making, Lacquer work, Copper work	Weaving, Arms & weapons making	–
Himachal Pradesh	Weaving, Gun powder making, Wood carving, Pottery, Bell– metal work	Basketry, Weaving, Vessel making, Blacksmithy, Wood work	–
Jammu & Kashmir	Embroidery, Weaving, Pottery, Wood carving, Basketry, Blacksmithy, Brass metal work	Basketry, Weaving	Blacksmithy
Karnataka	Weaving, Wood work, Embroidery, Copper, Brass vessel making, Saddle making, Pottery, Blacksmithy, Gold –smithy, Basketry	Leather work, Basketry, Salt making, Embroidery, Blacksmithy, Wood work, Weaving	–
Lakshadwip	Coir	–	Coir
Kerala	Pottery, Wood work, Basketry, Weaving, Bell– metal work, Mat weaving, Gold –smithy	Basketry, Umbrella making, Mat weaving, Knife making	Basketry, Blacksmithy, Pottery, Musical instrument making, Leather work

Madhya Pradesh	Basketry, Bell- metal work, Weaving, Dyeing & printing, Cracker making, Blacksmithy, Brass & bell- metal work, Wood work, Bangle making, Gold- & silver –smithy, Leaf cup making	Blacksmithy, Weaving, Leather work, Basketry, Pottery, Mat weaving	Blacksmithy, Basketry, Wood carving, Brass & silver ornaments making, Musical Instrument making, Stone work
Maharashtra	Stone carving, Blacksmithy, Copper & brass vessel making, Rope making, Knife making, Brass metal work, Gold –smithy Wood work, Weaving, Pottery, Carpet making	Leather work, Basketry, Stone work, Weaving	Basket making
Manipur	–	–	Pottery
Meghalaya	Basketry	–	Musical instrument making,
Mizoram	Basketry	–	Basketry, Pottery, Weaving
Nagaland	–	–	Basketry, Woollen blanket making, Wood carving, Weaving, Blacksmithy, Moddeling, Leather work, Stone carving
Orissa	Bangle making, Lock & key making, Pottery, Weaving, Basketry, Blacksmithy, Wood work, Musical instrument making, Rope making, Cane work, Conch shell product making, Brass & bell metal work	Basketry, Pottery, Weaving, Mat weaving Vermilion making, Leather work, Rope making	Rope making, Stone cutting, Basketry, Pottery, Wood carving

Punjab	Basketry, Woollen blanket making, Pottery, Weaving, Lacquer work	Leather work Basketry, Wood carving	Leather work, Basketry
Rajasthan	Basketry, Dyeing & printing, Bangle making, Lime making, Wood carving, Embroidery Cracker making, Black-smithy, Lacquer work, Cane basketry, Comb making, Weaving	Comb making, Basketry, Leather work Weaving, Stone carving	–
Sikkim	Blacksmithy	Wood work	Paper making
Tamil Nadu	Stone work, Weaving, Gold–smithy Ivory work, Coir making, Leather work, Wood work, Copper & brass work, Palm leaf products making, Lacquer work	Basketry, Wood carving, Mat making, Weaving	Musical Instrument making, Weaving, Basketry
Tripura	Basketry, Weaving, Blacksmithy	Wood work	Basketry, Weaving
Uttar Pradesh	Weaving, Wood work, Basketry, Dying & printing Blacksmithy, Pottery, Bangle making, Lacquer product Cracker making, Knife making, Blanket making, Bell-metal vessel making	Basketry, Leather work Weaving, Copper, Bronze Brass articles	Woollen blankets Shoe making,
West Bengal	Wood work, Weaving, Bell & brass metal work Gold –smithy, Conch shell product making, Blacksmithy, Pottery, Cracker work Stone carving, Musical instrument making, Basketry, Bangle making	Basketry, Weaving, Shoe making, Gold– & silver –smithy Blacksmithy,	Basketry, Woollen blanket making, Weaving, Musical instrument making

SOME REPRESENTATIVE CRAFTS OF INDIA
(Practised by the general communities)



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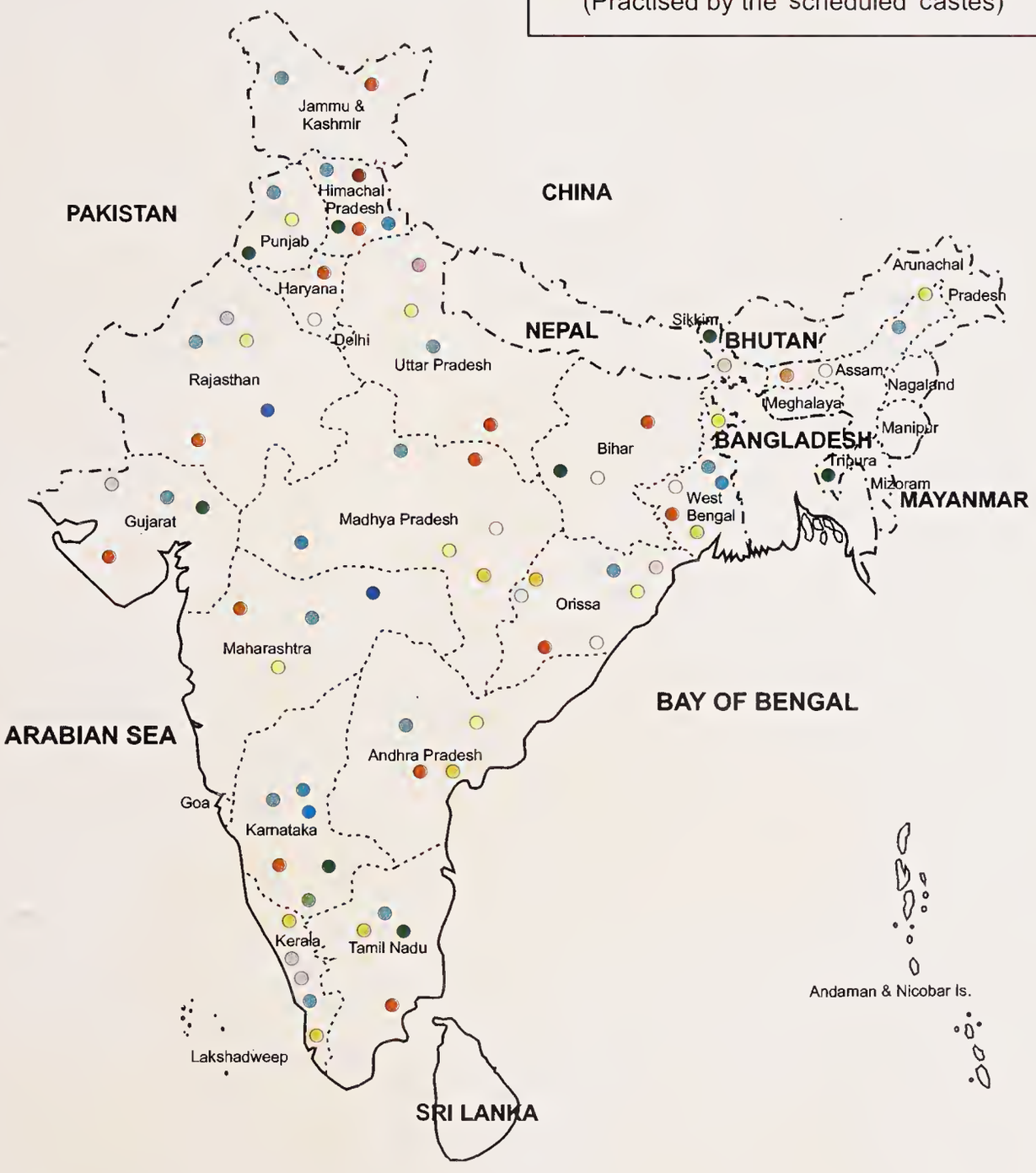
Bangle making	Copper & Brass vessel making	Lime making
Basketry	Cracker making	Musical instruments
Bell metal products	Dying cloth & printing	Mat making
Blacksmithy	Embroidery work	Palm leaf product
Blanket making	Gold jewellery work	Pottery
Cane work	Gun powder making	Rope making
Carpet, Dari making	Ivory products	Saddle making
Coin counterfeit	Lock & key making	Stone carving
Conch shell products	Knife making	Sword making
Comb making	Lacquer work	Weaving
Coir making	Leather work	Wood carving

NOT TO SCALE

SOME REPRESENTATIVE CRAFTS OF INDIA
(Practised by the scheduled castes)



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Arms & Weapons	Leather products	Salt making
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Blacksmithy	Mat weaving	Umbrella making
Comb making	Net weaving	Vermillion making
Copper/Bronze/Brass	Pottery	Vessel making
Embroidery	Rope making	Weaving
Gold/Silver	Shoe making	Wood carving
Knife making		

NOT TO SCALE

SOME REPRESENTATIVE CRAFTS OF INDIA
(Practised by the scheduled tribes)

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Basketry	Modelling	Snow shoe making
Blacksmithy	Musical instruments	Stone cutting
Brass/Silver Ornament	Paper making	Weaving
Coir product	Pottery	Wood carving
Leather work	Rope making	Woolen blankets

NOT TO SCALE

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